

A LIST OF COMMERCIALLY AVAILABLE DETERGENTS,  
WETTING, DISPERSING, AND EMULSIFYING AGENTS

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## Introduction

A contact insecticide must come into intimate contact with an insect in order to act on it. Many insects are covered with small hairs or chitinous integument which are not easily wetted, and very small insects are likewise wetted with difficulty by aqueous sprays. In order to secure a good contact between the insect and the aqueous solution or suspension of insecticide it is often necessary to add to the water a material that will increase its wetting power. Various fatty-acid soaps are commonly used for this purpose, and in other types of insecticidal preparations. However, fatty-acid soaps have definite disadvantages for use with insecticides, such as incompatibility with lime-sulfur, bordeaux mixture, calcium arsenate, and other compounds containing calcium. Much of the effectiveness of a fatty-acid soap is lost in hard water owing to the precipitation of insoluble calcium and magnesium soaps. Moreover, soaps containing free alkali or which hydrolyze readily with the formation of free alkali can not be used with pyrethrum, derris, or cube, because the active principles of these plants are easily decomposed into inert compounds in the presence of alkaline solutions.

Because of these limitations of ordinary soaps, various sulfated and sulfonated organic compounds have lately come into use. A brief account of the chemistry of these compounds has been given by Roark (*Jour. Econ. Ent.* 30: 522. 1937.) These sulfated and sulfonated compounds are extensively used in the textile industry as detergents and wetting-out agents. Some of them are used in place of fatty-acid soaps as wetting agents or emulsifying agents in insecticidal preparations, and doubtless others are suitable for this purpose. In addition some of them, for example, sodium lauryl sulfate and butylphenylphenol sodium sulfonate, themselves possess insecticidal value, especially against aphids.

There are a great number of proprietary detergents, wetting, dispersing, and emulsifying agents which have been used or which may possibly

be of use in the formulation of contact insecticides or in other types of insecticidal preparations. The present paper, which is a revision of Bureau of Entomology and Plant Quarantine publication E-426, presents an extensive list of such materials which includes, but is not restricted to, the various sulfated and sulfonated organic compounds mentioned above. As new ones appear frequently, no claim is made that the list is complete. The ones included are those which have come to the writer's attention and concerning which some information is available as to chemical or physical properties.

Under "Surface properties" are given the surface tension (S.T.), interfacial tension (I.T.), and spreading coefficient (S.C.) of 1-percent aqueous solutions (dispersions) on a refined mineral (medicinal) oil, all in dynes per cm. at 25° C., except as otherwise noted. (See Ind. Eng. Chem. 27: 1219. 1935.) The spreading coefficient is a measure of the wetting power of the solution for a surface of the oil employed as a standard, and is equal to the surface tension of the oil (30.5 dynes per cm.) less the sum of the surface and interfacial tensions; the greater its algebraic value, the greater the wetting power. For example, a product with a spreading coefficient of -5 dynes per cm. is a better wetter than one with a coefficient of -23, but is surpassed by one with a coefficient of +5. However, the spreading coefficients at one concentration do not necessarily indicate the relative values at other concentrations, or for other surfaces.

The information contained in this compilation has been obtained chiefly from the manufacturers of the products listed or from the literature. The Department of Agriculture assumes no responsibility for the correctness of the statements included herein; moreover, it does not recommend any of the products mentioned.

The sources of information are indicated by numbers in parentheses, which refer to the following six items:

- (1) Manufacturer's literature or communication.
- (2) As determined by author.
- (3) 1935-1936 Yearbook American Association Textile Chemists and Colorists, pp. 386-398.
- (4) Ind. Eng. Chem. 31: 66. 1939.
- (5) Soap. 14 (No. 1): 30. 1938 (January).
- (6) Ind. Eng. Chem. 26: 24. 1934.

# ABOPON (Glyco Products Co., Inc.)

## Description, properties, uses

Transparent, viscous liquid. Sp. gr. 1.68 at 25° C. Water soluble, insoluble in other liquids. Not hygroscopic at ordinary humidity. Neutral, odorless, slight saline taste. Is precipitated by solutions of heavy metallic salts. Dries in air to form smooth, non-tacky, flexible, glossy film. Non-combustible. Scouring agent, and other uses. (1)

## Chemical composition

Complex sodium borophosphate (3)

## Surface properties (dynes per cm.) (2)

S. T. 54.6	I. T. 32.7	S. C. -56.8
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# ADITEX LU-1 (Hart Products Corp.)

## Description, properties, uses

Used in kier boiling in textile industry (1)

## Chemical composition

Soluble terpene oils (1)

# AEROSOL AY (American Cyanamid and Chemical Corp.)

## Description, properties, uses

White, waxy lumps. Solubility in water at room temperature, 40.0 grams per 100 cc. (pH 6.5 to 7.0). Readily soluble in polar organic solvents; extremely soluble in non-polar organic solvents. Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalies; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

## Chemical composition

A diamyl ester of sodium sulpho succinate. A practically pure chemical substance. A homologue of Aerosol OT and Aerosol MA. (1)

## Surface properties (1)

Conc. (%)	1.0	0.10
S. T. (20° C.)	31.5	38.8

# AEROSOL MA (American Cyanamid and Chemical Corp.)

## Description, properties, uses

White, waxy lumps. Solubility in water at room temperature, 40.0 grams per 100 cc. (pH, 6.5 to 7.0). Readily soluble in polar organic solvents; extremely soluble in non-polar organic solvents. Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalies; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

## Chemical composition

A dihexyl ester of sodium sulfo succinate. A practically pure chemical substance. Homologue of Aerosol OT and Aerosol AY. (1)

## Surface properties (1)

Conc. (%)	1.0	0.10
S.T. (20° C.)	31.5	38.8

## AEROSOL OS (American Cyanamid and Chemical Corp.)

## Description, properties, uses

A yellowish-brown powder, somewhat hygroscopic. Solubility in water at room temperature, 30.0 grams per 100 cc. (pH, 6.5 to 7.0). Readily soluble in polar organic solvents of low molecular weight, and less soluble in those of higher molecular weight; only slightly soluble in nonpolar organic solvents. Stable in strong acids and in strong alkalis. Useful as adjuvant to alkaline detergents. Wetter and detergent. (1)

## Chemical composition

Sodium salt of an alkyl naphthalene sulfonic acid, practically 100% pure. (1)

## Surface properties (1)

Conc. (%)	1.0	0.10
S.T. (20° C.)	34.8	37.5

## AEROSOL OT 100% (American Cyanamid and Chemical Corp.)

## Description, properties, uses

Resembles paraffin in appearance. It is practically nonhygroscopic and is in pellet form. Solubility in water at room temperature, 1.5 grams per 100 cc. (pH, 6.5 to 7.0); at higher concentrations forms dispersions. Readily soluble in polar organic solvents; extremely soluble in non-polar organic solvents. Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalis; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

## Chemical composition

A dioctyl ester of sodium sulfo succinate. U. S. Patent No. 2,028,091. Homologue of Aerosol MA and Aerosol AY. (1)

## Surface properties (1)

Conc. (%)	1.0	0.20	0.10	0.01
S.T. (20° C.)	26.8	28.1	26.8	32.1

## AEROSOL OT AQUEOUS (American Cyanamid and Chemical Corp.)

## Description, properties, uses

A somewhat opaque, slightly gelatinous dispersion of Aerosol OT 100% in water. Standard product contains 10% of Aerosol OT 100%, but may be obtained in a 25% dispersion. Solubility in water at room temperature (10% dispersion), 15 g. per 100 cc. (pH, 6.5 to 7.0). Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalis; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

## Chemical composition

Ester of a sulfonated bicarboxylic acid, dispersed in water. (1)

## Surface properties (10% dispersion) (1)

Conc. (%)	1.0	0.20
S. T. (20° C.)	26.7	34.5

## AEROSOL OT-C (American Cyanamid and Chemical Corp.)

## Description, properties, uses

White, free-flowing powder containing 10% of Aerosol OT-100% and an inert organic diluent. Solubility in water at room temperature, 11.0 grams per 100 cc. (pH, 6.5 to 7.0). Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalis; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

## Chemical composition

Ester of a sulfonated bicarboxylic acid, 10%, plus an inert organic diluent.

**AEROSOL OT CLEAR** (American Cyanamid and Chemical Corp.)

Description, properties, uses

A water-white, free pouring liquid consisting of Aerosol OT 100%, water, and mutual solvent. Obtainable in 60%, 25% and 10% concentrations. Miscible with water in all concentrations (pH, 6.5 to 7.0). Resistant to precipitation by hard waters. Moderately stable in acid solutions and in mild alkalies; decomposed by strong bases. Wetter, emulsifier, detergent. (1)

Chemical composition

Ester of a sulfonated bicarboxylic acid, plus water and a mutual solvent. (1)

**ALBATEX ED** (Ciba Company)

Description, properties, uses

A light-tan powder. (2). Kier-boiling assistant for vat-dyed or printed materials; protective oxidizing agent. (1)

Chemical composition

Sodium m-nitrobenzenesulfonate (1)

Surface properties (dynes per cm.) (2)

S. T., 63.4 I. T., 31.2 S. C., -64.1

**ALIPHATIC ESTER SULFATE** (Conyx Oil and Chemical Co.)

Description, properties, uses

Viscous, turbid liquid; greenish-brown color. Wetter and detergent. (1)

Chemical composition

Oil ester sulfate (4)

Surface properties (dynes per cm.) (2)

S. T., 32.9 I. T., 6.1 S. C., -8.5

**ALKANOL E** (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Light-tan powder. Wetter and detergent. (1)

Chemical composition

Sodium alkyl-naphthalenesulfonate (3)

Surface properties (dynes per cm.) (2)

S. T., 32.5 I. T., 6.4 S. C., -8.4

**ALKANOL HG** (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Brown mobile solution. Wetter, conditioner for yarn, fungicide. (1)

Chemical composition

Sodium alkyl-naphthalenesulfonate plus a fungicide. (1)

Surface properties (dynes per cm.) (2)

S. T., 34.9 I. T., 7.7 S. C., -12.1

**ALKANOL S** (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

A white powder (2).

Dispersing agent used chiefly in metal processing (4)

Chemical composition

Sodium tetrahydronaphthalenesulfonate (3)

Surface properties (dynes per cm.) (2)

S. T., 49.2 I. T., 22.3 S. C., -41.0



ALCANOL SA (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

A light-tan powder (2).

Wetter (1).

Chemical composition

Sodium alkyl-naphthalenesulfonate (3)

Surface properties (dynes per cm.) (2)

S. T., 29.6      I. T., 2.9      S. C., -2.0

ALPHASOLS (American Cyanamid & Chemical Corp.)

The Alphasols are now sold under the name, Aerosol, with the corresponding code letter. Example: Alphasol OT is now Aerosol OT.

ALOX 152 (Alox Corporation)

Description, properties, uses

A brown, soft paste (2).

Wetting agent for metals; used in lubricants (4).

Chemical composition

Complex methyl esters of high molecular weight alcohols, acids, and lactones (4)

ALOX 350 (Alox Corporation)

Description, properties, uses

A brown paste (2).

Wetting agent for metals; used in lubricants (4).

Chemical composition

Complex methyl esters of high molecular weight alcohols, acids, and lactones (4).

ALOX 600 (Alox Corporation)

Description, properties, uses

A brown paste (2).

Wetting agent for metals; used in lubricants (4).

Chemical composition

Complex methyl esters of high molecular weight alcohols, acids, and lactones (4)

ALOX 700 (Alox Corporation)

Description, properties, uses

A brown paste (2).

Wetting agent for metals; used in lubricants (4).

Chemical composition

Complex methyl esters of high molecular weight alcohols, acids, and lactones (4)

ALOX 800 (Alox Corporation)

Description, properties, uses

A light-brown, mobile liquid (2).

Wetting agent for metals; used in lubricants (4).

Chemical composition

Complex methyl esters of high molecular weight alcohols, acids, and lactones (4).

2-AMINO-2-METHYL-1,3-PROPANEDIOL (Commercial Solvents Corporation)

Description, properties, uses

A light-colored, crystalline solid.

Fatty acid salts of this compound used as wetters, emulsifiers, detergents (1).

Chemical composition

Fatty acid salts of named compound (1).

2-AMINO-2-METHYL-1-PROPANOL (Commercial Solvents Corporation)

Description, properties, uses

A colorless, transparent, slightly viscous liquid (2).

Fatty acid salts of this compound used as wetters, emulsifiers, detergents (1).

Chemical composition

Fatty acid salts of named compound (1).

AMINOSTEARIN (Glyco Products Co., Inc.)

Description, properties, uses

Light-yellow, waxy solid. M. P. 56° C. Gives stable, white emulsions. (1)

Surface properties (2)

S. T., 23.4      I. T., 6.7      S. C., +0.4

AMMONIUM LAURATE S (Glyco Products Co., Inc.)

Description, properties, uses

Supplied in two grades, anhydrous and liquid. Anhydrous: A tan-colored, soft, wax-like material, free from ammonia odor. M. P., 48°-50° C. Soluble in cold alcohol and mineral oil, and in hot vegetable oils. Readily dispersible in hot water. Blends readily with waxes. Sp. gr., 0.85. pH of 10% aqueous dispersion, 7.7. Liquid: Light-colored liquid with ammoniacal odor. Readily soluble in cold water. Emulsifier. (1)

AMMONIUM LINOLEATE (Beacon Company) (a)

AMMONIUM LINOLEATE S (Glyco Products Co., Inc.) (b)

Description, properties, uses

Light-colored paste, ammoniacal odor. Emulsifier for oils, waxes, and hydrocarbon solvents for industrial purposes. Especially suited for certain types of water-repellent finishes, as the ammonia can be driven off from the emulsion when dry. (1 b)

Chemical composition

Ammonium linoleate (1)

AMMONIUM STEARATE S (Glyco-Products Co., Inc.)

Description, properties, uses

Supplied in two grades, anhydrous and paste. Anhydrous: Light-tan, waxy solid. M. P., 74-76° C. Stable, free from ammonia odor. Dispersible in boiling water. Soluble in hot alcohol, oils, hydrocarbons. Sp. gr. (25°/25° C.). 0.889. pH of a 3% aqueous dispersion, 7.5 at 25° C. Paste: A white paste with an ammoniacal odor. Emulsifier. Integral waterproofing agent for concrete and stucco. (1)

Chemical composition

Ammonium stearate (1)

Surface activity (2)

S. T., 23.4      I. T., 14.2      S. C., -7.1

AMMONIUM SULPHORICINOLEATE (Beacon Company)

Description, properties, uses

A viscous liquid, neutral in reaction. Miscible with oils. Disperses in water. Recommended by the manufacturer for use in glues and in industrial emulsions. (1)

Chemical composition

Ammonium sulfuricinoleate (1)

OLEOTATE (Beacon Company)

Description, properties, uses

A viscous paste, alkaline in reaction. Recommended by the manufacturer as substitute for sulfonated oils in many cases. Effective in the cold. Emulsifier. (1)

Chemical composition

Ammonium oleoate (1)

AQUAEL (Glyco Products Co., Inc.)

Description, properties, uses

A yellow paste for preparation of rubless floor polishes. Emulsifier. (1)

Surface properties (2)

S. T., 28.1      I. T., 14.9      S. C., -12.5

ARCTIC SYNTEX A (Colgate-Palmolive-Peet Co.,)

Description, properties, uses

Light-tan powder. Wetter, emulsifier, detergent. (1)

Chemical composition

$C_{17}H_{33}COOC_6H_4.SO_3Na$  (1)

Surface properties (2)

S. T., 28.1      I. T., 3.9      S. C., +0.5

ARCTIC SYNTEX M (Colgate-Palmolive-Peet Co.)

Description, properties, uses

A white powder. Wetter, detergent, emulsifier. (1)

Chemical composition

$R-COOCH_2.CHOH.CH_2.CSO_3Na$ , where  $RCOO$  represents mixed coconut oil fatty acid radicals. (1)

ARCTIC SYNTEX T (Colgate-Palmolive-Peet Co.)

Description, properties, uses

Nearly white, powder. Wetter, emulsifier, detergent. (1)

Chemical composition

$C_{17}H_{33}CO.NH.C_2H_4.SO_3Na$  (1)

Surface properties (2)

S. T., 29.6      I. T., 3.3      S. C., -2.4



**ARESKAP (Monsanto Chemical Company)**

**Description, properties, uses**

Tan-colored, fine powder. Soluble in water and in organic solvents such as acetone, alcohol, pine oil, oleic acid. Somewhat hygroscopic. Unaffected by water up to 60 grains CaCO<sub>3</sub> hardness per U.S. gallon. Wetter and penetrant. (1)

**Chemical composition**

Sodium monosulfonate of butylphenylphenol (1)

**Surface properties (2)**

S. T., 30.4            I. T., 2.3            S. C., -2.2

**ARESIET (Monsanto Chemical Company)**

**Description, properties, uses**

Tan-colored, fine powder. Soluble in water and in alcohol, but not in acetone; less hygroscopic than Areskap. Not precipitated in water of 25 grains CaCO<sub>3</sub> hardness per U. S. gallon. Wetter, emulsifier. (1)

**Chemical composition**

Sodium monosulfonate of monobutyl diphenyl (4)

**Surface properties (2)**

S. T., 31.0            I. T., 3.3            S. C., -3.8

**ARESKLENE (Monsanto Chemical Company)**

**Description, properties, uses**

Tan colored, fine powder. Slightly aromatic odor. Soluble in water, alcohol, acetone; insoluble in carbon tetrachloride and petroleum products. Not precipitated in water of 25 grains CaCO<sub>3</sub> hardness per U. S. gallon. Wetter, penetrant, emulsifier. (1)

**Chemical composition**

Sodium disulfonate of dibutyl phenyl phenol (4)

**Surface properties (2)**

S. T., 29.0            I. T., 1.4            S. C., +0.1

**ARYLENE (Hart Products Corporation)**

**Description, properties, uses**

Wetting-out agent; used in textile industry (1)

**Chemical composition**

A sulfonated aromatic compound (1)

**ATLAS G-650 (Atlas Powder Company)**

**Description, properties, uses**

A viscous, oily liquid; odor and taste similar to castor oil; non-hygroscopic. Freezing point, about -15° C.; refractive index, 1.4601 at 25° C.; density, 8 lb. per gal.; viscosity, 1700-2100 cp. at 25° C.; acid number, less than 15; saponification number, 170-180. Soluble in coal-tar hydrocarbons, ketones, ethers, other alcohols, chlorinated solvents, alcohols, esters, vegetable and animal oils, and amines. Moderately soluble forming turbid solutions, in hydrocarbons. Insoluble in water and polyhydric alcohols; emulsifies slightly in water. Discolors in air above 100° C.; stable at room temperature in range pH 2-11, but clouds in dilute or concentrated alkali solutions. Emulsifier; at pH above 7 loses its water-in-oil emulsifying properties due to formation of soaps; also loses its effectiveness at a pH below 4. (1)

**Chemical composition**

A ricinoleic acid ester of sorbitol, technical (1)

# ATLAS G-759 (Atlas Powder Company)

## Description, properties, uses

A slightly hygroscopic, viscous liquid, having a faint caramel odor and the characteristic bitter after-taste of lauric acid. Setting point, 14-16° C.; refractive index 1.472 at 25° C.; acid no., 5-7; saponification no., 160-170; pH, 6.0-7.0; viscosity 4000 to 6000 cp. at 25° C.; density, about 8.5 lb. per gal. Forms a white dispersion in hot or cold water; soluble in lower alcohols, chlorinated solvents, ether alcohols, amines; moderately soluble in aromatic hydrocarbons, ethers, ketones, esters, vegetable and animal oils; insoluble in polyhydric alcohols. Stable in dilute mineral acid and alkali solutions in range pH 2-12 at ordinary temperature. Hydrolyzed by concentrated mineral acids and saponified by concentrated alkalis of pH 12-14. Emulsifier for mineral oils, vegetable oils and fats. Helps to keep the pigment from caking in pigment suspensions. Efficient as a surface tension depressant. (1)

## Chemical composition

Reaction product of commercial lauric acid and sorbitol; consists mainly of sorbitan monolaurate,  $C_6H_8O(OH)_3(OCOC_{11}H_{23})$ . (1)

## Surface properties (1)

Conc. (%)	1.0	0.2	0.05	0.01
S. T.	25.8	26.8	27.4	27.8

# ATLAS G-772 (Atlas Powder Company)

## Description, properties, uses

A non-hygroscopic, viscous oil having a faint caramel odor and the characteristic bitter after-taste of lauric acid. Setting point, 15-16° C.; refractive index, 1.472 at 25° C.; saponification No., 160-170; acid no., 3-6; viscosity 2000 to 3000 cp. at 25° C.; density, about 8.5 lb. per gal. Self-emulsifiable in water at room temperatures. Soluble in hydrocarbons, alcohols, ether alcohols, amines, cellosolve acetate. Moderately soluble in ketones, chlorinated solvents, esters, polyhydric alcohols, ethers, vegetable and animal oils. Stable in mineral acid and dilute alkali solutions, pH 0.5 to 12, at ordinary temperature. Hydrolyzed by hot mineral acid solutions. Saponified by concentrated alkalis. Emulsifier for mineral and vegetable oils, and fats. (1)

## Chemical composition

A modified mannitan - lauric acid ester, technical (1)

## Surface properties (1)

Conc. (%)	1.0	0.2	0.05	0.01
S. T.	24.3	25.6	26.0	26.4

#### ATLAS G-904 (Atlas Powder Company)

##### Description, properties, uses

A viscous liquid having a slight fatty odor and a characteristic lauric ester taste. Setting point, 15-20° C.; refractive index, 1.475 at 25° C.; density, about 8.5 lb. per gal.; viscosity, 2000-4000 cp. at 25° C.; acid no., less than 6. Soluble in coal-tar hydrocarbons, mineral oil, ether alcohols, chlorinated solvents, ketones and alcohols. Slightly soluble in most other organic solvents. Insoluble in water and polyhydric alcohols. Stable in solutions of pH range 0.5 to 12.0 at ordinary temperatures. Saponified by strong alkalis. Attacked by acids at 100° C. Emulsifier for oils and fats. (1)

##### Chemical composition

A reaction product of mannitol and commercial lauric acid; consists chiefly of mannitol monolaurate,  $C_6H_8O(OH)_3(OCOC_{11}H_{23})$ . (1)

##### Surface properties (1)

Conc. (%)	2.5	1.25	0.5	0.2	0.04
S. T.	26.9	26.9	26.9	26.9	27.5

#### ATLAS G-908 (Atlas Powder Company)

##### Description, properties, uses

A synthetic wax; non-hygroscopic, practically tasteless, mild fatty odor. Setting point, 45-55° C.; acid no., less than 6; density, 8.2 lb. per gal. Soluble in the lower alcohols and alcohol ethers. Sparingly soluble in warm esters, hydrocarbons and chlorinated solvents. Insoluble in water and polyhydric alcohols; self-emulsifiable in hot water. Not appreciably attacked by aqueous solutions, at ordinary temperatures, of pH values between 0.5 and 12.0. Slowly hydrolyzed by hot, dilute acids. Attacked by warm or concentrated alkalis. Emulsifying agent for vegetable oils and waxes. (1)

##### Chemical composition

Chiefly the monostearate of mannithan,  $C_6H_8O(OH)_3(OCOC_{17}H_{35})$ , with small amounts of di- or higher esters, and a little free mannithan.

#### ATLAS G-909 (Atlas Powder Company)

##### Description, properties, uses

A synthetic wax; non-hygroscopic, practically tasteless, mild fatty odor. Setting point, 45-55° C.; acid no., less than 5; density, 8.2 lb. per gal. Soluble in warm aromatic hydrocarbons, chlorinated solvents, and alcohols. Sparingly soluble in esters, ketones, ethers, petroleum solvents, ether alcohols. Insoluble in water and polyhydric alcohols. Self-emulsifiable in hot water. Slowly hydrolyzed by hot dilute mineral acids and readily saponified by alcoholic solutions of alkalis; not attacked appreciably in water at ordinary temperatures in range pH 0.5 to 12.0. Emulsifier for vegetable oils and waxes. (1)

##### Chemical composition

Chiefly the monostearate of sorbitan,  $C_6H_8O(OH)_3(OCOC_{17}H_{35})$ , with small amounts of di- or higher esters, and a little free sorbitan. (1)

#### ATLAS G-944 (Atlas Powder Company)

##### Description, properties, uses

A non-hygroscopic, viscous liquid, having a bland oily taste and faint caramel odor. Melting point, 5-6° C.; acid no., less than 10; saponification number, 135-140; density, 8.5 lb. per gal.; pH, 6.0-7.0. Self-emulsifiable in hot water; soluble in most organic solvents and oils; sparingly soluble in esters; insoluble in polyhydric alcohols. Stable in dilute mineral acids and in dilute alkali solutions at ordinary temperatures, pH 2-12. Hydrolyzed by warm concentrated mineral acids and by stronger alkalis. Emulsifier for mineral oils (generally, water-in-oil type) and vegetable and animal oils (generally, oil-in-water type). Helps to keep the pigment from caking in pigment suspensions. (1)

##### Chemical composition

Sorbitan monooleate, technical,  $C_6H_8O(OH)_3(OCOC_{17}H_{33})$ , with small amounts of di- or higher esters and a little free sorbitan. (1)

##### Surface properties (1)

Conc. (%)	1.0	0.2	0.05	0.01
S. T.	27.2	29.0	30.0	30.9

#### ATLAS G-954 (Atlas Powder Company)

##### Description, properties, uses

A viscous liquid, having a slight fatty odor and a bitter taste. Setting point, 10-15° C.; refractive index, 1.485 at 25° C.; density, about 8.5 lb. per gal.; acid no., less than 6; viscosity, 2500-4500 cp. at 25° C. Soluble in hydrocarbons, ketones, ether alcohols, chlorinated solvents, alcohols. Slightly soluble in vegetable and animal oils, ethers, methyl alcohol, esters, amines. Insoluble in water and in polyhydric alcohols. Stable in range pH 0.5 to 12.0 at 25° C. Saponified by strong alkalis. Hydrolyzed by acids at 100° C. Emulsifier for vegetable oils. (1)

##### Chemical composition

A reaction product of mannitol and commercial oleic acid; consists mainly of mannitan monooleate,  $C_6H_8O(OH)_3(OCOC_{17}H_{33})$ . (1)

#### AVIROL (E. I. du Pont de Nemours & Co., Inc.)

##### Description, properties, uses

Name changed to Duponol L-144-WD (1)

#### AVITEX A. D. (E. I. du Pont de Nemours & Co., Inc.)

##### Description, properties, uses

Clear, amber, mobile liquid. Levelling agent and softening agent for dyeing. (1)

##### Chemical composition

Specially sulfated oleyl alcohol (1)

#### AVITEX SF (E. I. du Pont de Nemours & Co., Inc.)

##### Description, properties, uses

White paste. Used as textile softener. (1)

##### Chemical composition

Cetyl sulfate. (1)

AVITEX W (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

White paste (1)

Chemical composition

Partially sulfated stearyl alcohol (1)

BEACONOL-A (Beacon Company)

Description, properties, uses

A powder; soluble in water; insoluble in hydrocarbons. Recommended by the manufacturer for use in insecticidal sprays, in fruit washing, in the paper industry, and in cosmetics. Detergent, wetting and emulsifying agent. (1)

BEACONOL-M (Beacon Company)

Description, properties, uses

A water-white liquid; miscible with mineral spirits in all proportions. Wetting, penetrating and dispersing agent. (1)

BEACONOL-S (Beacon Company)

Description, properties, uses

Grayish-colored paste; soluble in water in all proportions. Unaffected by hard water, calcium or magnesium salts. Recommended by the manufacturer for textile, leather and paper processing; also for pigment dispersion in aqueous media. Wetting, penetrating and dispersing agent. (1)

BEACONOL-T (Beacon Company)

Description, properties, uses

A water-white liquid, miscible with hydrocarbons in all proportions. Suggested particularly for use when the vehicle is turpentine or oils other than mineral oil. Recommended by the manufacturer for use in printing inks, varnish stains, and in oil grinding of pigments. Wetting, penetrating and dispersing agent. (1)

BEACOSCOPE-A (Beacon Company)

Description, properties, uses

A dark-brown, viscous liquid (2).

A naphthenic soap recommended by the manufacturer as a general low-cost emulsifying agent for paraffin wax, coal-tar oil, cresylic acid, cutting oils, disinfectants, insecticides, animal dips, cattle sprays, metal polishes, laundry soap, floor scrubs, dry-cleaning soaps, soluble oils and textile specialties. (1)

Chemical composition

A naphthenic soap containing: moisture, 1/2 - 1%; unsaponifiable matter (mineral oil), 45-50%; dry soaps, 40-45%; ash, 5-10%; free fatty acid, trace; free alkali as NaOH, none. (1)

BENSAPOL (Jacques Wolf & Co.)

Description, properties, uses

A light-brown, transparent, slightly viscous liquid (2).

Wetter, detergent; used in textile industry. (1)

Chemical composition

Sulfonated oils and solvent (1)

BETASOL OT-A (American Cyanamid & Chemical Corp.)

Description, properties, uses

Wetter, used in leather industry (1)

Chemical composition

Sulfonated ester of dicarboxylic acid (1)

BLENDENE (Glyco Products Co., Inc.)

Description, properties, uses

Oily liquid with pleasant pine odor. Mixes with mineral oil and other hydrocarbons producing clear soluble oils. Emulsifier, for fluid emulsions of oil, solvents, etc. (1)

Surface properties (2)

S. T., 29.7      I. T., 4.2      S. C., -3.4

BOZETOL (Hart Products Corp.)

Description, properties, uses

Wetter; used in textile industry (1)

Chemical composition

Sulfonated derivative of castor oil (1)

CALGON (Calgon Inc.)

Description, properties, uses

White flakes. Scouring and detergent assistant. (1)

Chemical composition

Sodium hexametaphosphate (3)

Surface properties (2)

S. T., 71.3      I. T., 46.9      S. C., -67.7

CARBODITE (Beacon Company)

Description, properties, uses

A white powder; edible, tasteless and odorless. Requires a preservative. Recommended by the manufacturer as emulsifier in food emulsions of essential oils, mineral oils, fish oil and vegetable oils. (1)

CETHAINE (Beacon Company)

Description, properties, uses

White power for use in emulsion paints, polishes and oils. Effective in the cold. Alkaline reaction. This material should be allowed to soak for 24 hours and then dispersed thoroughly with a high-speed stirrer. Emulsifier and suspending agent. (1)

CLAY DEFLOCCULANT NO. 2 (R. T. Vanderbilt Co.)

Description, properties, uses

Dark-brown solution (17% solids), miscible in all proportions with water to form a clear solution. pH of 1% solution, 10 to 12. Slight reduction in surface tension and little tendency to foam. Not a wetting agent, but may be used as a emulsifying agent and acts as a protective colloid. Stable in the presence of mild alkalies. Not stable in the presence of acids. Unstable on boiling. Recommended by the manufacturer for the dispersion of certain clays in the ceramic industry. (1)

Chemical composition

Ammonia salt of long-chain organic acid. (1)



CLAY DEFLOCCULANT No. 5 (R. T. Vanderbilt Co.)

Description, properties, uses

Dark-brown solution (17% solids), miscible in all proportions with water to form a clear solution. pH of a 1% solution, 10 to 12. Slight reduction in surface tension. Little tendency to foam. Not a wetting agent, but may be used as an emulsifying agent and acts as a protective colloid. Stable in the presence of mild alkalies. Not stable in the presence of acids. Unstable on boiling. Recommended by the manufacturer for the dispersion of many types of clays in the ceramic industry. (1)

Chemical composition

A mixture of an ammonia salt of a long-chain organic acid and a small quantity of a sodium salt of an inorganic acid. (1)

CLENESCO F. P. (Cowles Detergent Company)

Name of this product changed to Drynet.

COLESCO (Cowles Detergent Company)

Description, properties, uses

Detergent and emulsifier for the laundry industry (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

COLLOIDINE-A (Beacon Company)

Description, properties, uses

A light-brown, viscous liquid (2).

Recommended by the manufacturer as an emulsion stabilizer, and for re-emulsifying "broken" emulsions. (1)

COMINOL (Commonwealth Color & Chemical Co.)

Description, properties, uses

A light-colored, fine powder (2).

Wetter, detergent; used in textile industry. (4)

Chemical composition

Derivative of higher sulfonated alcohol (4)

COREKAL A (General Dyestuff Corporation)

Description, properties, uses

Powder, light-tan color. Wetter, emulsifier. (1)

Chemical composition

Sodium alkyl naphthalenesulfonate (1)

Surface properties (2)

S. T., 33.8      I. T., 6.4      S. C., -9.7

COREKAL B (General Dyestuff Corporation)

Description, properties, uses

Powder, light-tan color. Wetter. (1)

Surface properties (2)

S. T., 29.7      I. T., 1.8      S. C., -1.0

COREKAL NF (General Dyestuff Corporation)

Description, properties, uses

Mobile liquid, brown color. Wetter. (1)

Surface properties (2)

S. T., 32.4 I. T., 4.3 S. C., -6.2

CORIAL B (General Dyestuff Corporation)

Description, properties, uses

Powder, light-tan color. Wetter. (1)

Surface properties (2)

S. T., 29.8 I. T., 1.7 S. C., -1.0

COWLES CLEANER B (Cowles Detergent Company)

Description, properties, uses

Scouring agent for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent. (1)

COWLES CLEANER H H (Cowles Detergent Company)

Description, properties, uses

Scouring agent for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

COWLES CLEANER L (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

COWLES CLEANER S M (Cowles Detergent Company)

Description, properties, uses

Scouring agent for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

COWLES METAL CLEANER (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

COWLES PLATERS CLEANER (Cowles Detergent Company)

Description, properties, uses

Scouring agent for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

COWLES RAILROAD CLEANER (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for metal surfaces (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

**COWLES R SPECIAL** (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

**COWLES STRIPPER** (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

**COWLES U X SPECIAL** (Cowles Detergent Company)

Description, properties, uses

Scouring agent and emulsifier for the metal industry (1)

Chemical composition

Mixture of alkaline salt and emulsifier or wetting agent (1)

**DACONOL** (S. A. Day Mfg. Co., Inc.)

Description, properties, uses

Light-brown flakes (2).

An all-purpose surface active agent and organic detergent. Used as an antipitting agent in plating and cleaning solutions. Solutions in distilled water show pH values of 6.9 to 7.1. Does not decompose on standing in aqueous solution. Stable to strong acids and alkalis. Readily and completely soluble in soft water, hard water, and solutions of acid and alkali. Maximum concentrations for clear solutions in neutral soft water are: 15° C., 5%; 25° C., 2%; 50° C., 1.3%; 100° C., 2.1%. (1)

Chemical composition

Alkyl aryl sodium sulfonate (4).

Surface properties (1)

Conc. (%)	0.12	0.25	0.50	0.75	1.00
S. T. (25°C.)	33.0	32.5	32.0	31.8	31.6

**DAINTEX** (Hercules Powder Company)

Description, properties, uses

A blended liquid detergent, wetting and penetrating agent. Designed for laundry and cleaning purposes. (1)

Chemical composition

Miscible terpene alcohols and hydrocarbons (4)

**DARVAN No. 1** (R. T. Vanderbilt Co.)

Description, properties, uses

Light-brown powder almost completely soluble in water; solution slightly turbid. Recommended by the manufacturer for the dispersion of pigments, anti-oxidants and accelerators in compounding latex. (1)

Chemical composition

Sodium salt of an aryl sulfonic acid (1)

DARVAN No. 2 (R. T. Vanderbilt Company)

Description, properties, uses

Dark-brown powder, completely soluble in water forming a clear solution. Recommended by the manufacturer for the dispersion of certain pigments in compounding latex. (1)

Chemical composition

Mono-sodium salt of an aryl sulfonic acid (1)

DAXAD No. 11 (Dewey and Almy Chemical Co.)

Description, properties, uses

Light-brown powder, almost completely soluble in water (slight turbidity). Maximum concentration recommended at 70° F. is 30 to 40 percent. pH of 1% solution, 7 to 8.5. Reduction of surface tension is negligible and there is no tendency to foam. Not a wetting agent or emulsifying agent. Stable in the presence of mild alkalis and acids. Recommended by the manufacturer specifically for dispersing carbon black. Large quantities of casein may cause gelling. Effective only when external phase is water. (1)

Chemical composition

Sodium salt of an alkyl sulfonate (1). Polymerized organic salts of sulfonic acids of alkyl aryl type (4).

DAXAD No. 21 (Dewey and Almy Chemical Co.)

Description, properties, uses

Dark-brown powder, completely soluble in water to form a clear solution. Maximum concentration recommended at 70° F. is 25%. pH of a 1% solution, 7 to 8. Very slight reduction of surface tension with slight tendency to foam. Very little wetting capacity. May be used as an emulsifying agent only when colloid mill or homogenizer is used. Stable in the presence of mild alkalis and acids. Aqueous solution stable on boiling. Not recommended for use in presence of soaps or calcium salts. (1)

Chemical composition

Mono-calcium aryl sulfonic acid (1). Polymerized organic salts of sulfonic acids of alkyl aryl type (4).

DAXAD No. 23 (Dewey and Almy Chemical Co.)

Description, properties, uses

Dark-brown powder, completely soluble in water to form a clear solution. Maximum concentration recommended at 70° F. is 25%. pH of a 1% solution, 7 to 8. Very slight reduction of surface tension with slight tendency to foam. Very little wetting capacity. May be used as an emulsifying agent only when colloid mill or homogenizer is used. Stable in the presence of mild acids and alkalis. Aqueous solution stable on boiling. A generally applicable dispersing agent. (1)

Chemical composition

Mono-sodium aryl sulfonic acid (1). Polymerized organic salts of sulfonic acids of alkyl aryl type (4).

DAXAD No. 27 (Dowey and Almy Chemical Co.)

Description, properties, uses

A combination dispersing and suspending agent. Light-gray powder, partially soluble in water forming a highly colloidal, turbid suspension. Maximum concentration recommended at 70° F. is 20%. pH of a 1% solution is 7.5 to 8.5. Very slight reduction in surface tension with little tendency to foam. Very little wetting capacity, but may be used as emulsifying agent. Stable in the presence of mild alkalis; unstable in the presence of acids. Aqueous solution stable on boiling. Recommended by the manufacturer for the dispersion of very finely divided sulfur. (1)

Chemical composition

Mixture of a mono-sodium aryl sulfonate and an inorganic suspending agent. (1)

DECERESOL OT (American Cyanamid and Chemical Corp.)

Description, properties, uses

Wetter for textiles (1)

Chemical composition

A dioctyl ester of sodium sulfo succinate (1)

DEFLOC (Cowles Detergent Company)

Description, properties, uses

Detergent and emulsifier for the laundry industry (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

DEGUMTEX MK-105 (Hart Products Corp.)

Description, properties, uses

Detergent for textile industry (1)

Chemical composition

Sulfated oils and buffered alkalis (1)

DESOIL (Cowles Detergent Company)

Description, properties, uses

Detergent and emulsifier for the laundry industry (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

DETANOL (Commonwealth Color and Chemical Company)

Description, properties, uses

Light-colored, granular solid (2).

Wetter, detergent; used chiefly in textile industry (4)

Chemical composition

Derivative of a higher sulfonated alcohol (4)

DIAMMONIUM IMIDO DIPHOSPHORIC ACID (Victor Chemical Works)

Description, properties, uses

A white, free-flowing powder. Completely soluble in warm water. Sequesters calcium and magnesium ions. Detergent, emulsifier and soap builder. (1)

Chemical composition

Diammonium imido diphosphoric acid, manufactured under U. S. patent 2,122,122. (1)

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DIGLYCOL LAURATE (Beacon Company (a))  
(Glyco Products Co., Inc. (b))

Description, properties, uses

Transparent liquid, light-yellow color. Self-emulsifiable in water, forming stable milky emulsions. Soluble in alcohol, mineral oils, vegetable oils, hydrocarbon solvents. High boiling point. Non-hygroscopic. Sp. Gr. at 25° C., 0.963 to 0.968. Iodine no., 9-11; acidity (as lauric acid), 1 to 2%; water content less than 1%. A 5% aqueous dispersion at 25° C. has pH 8.5. (A special grade has pH 6.9.)

Chemical composition

Diglycol laurate (1)

Wetter and emulsifier. (1b)

Surface properties (2)

S. T., 25.8      I. T., 6.6      S. C., -1.9

DIGLYCOL OLEATE (Glyco Products Co., Inc.)

Description, properties, uses

Brown, slightly cloudy liquid. A nonalkaline liquid soap (U. S. patent No. 1,914,100). Emulsifier. (1)

Chemical composition

Diglycol oleate (1)

Surface properties (2)

S. T., 31.0      I. T., 8.2      S. C., -8.7

DIGLYCOL STEARATE S (Glyco Products Co., Inc. (a))

DIETHYLENE GLYCOL STEARATE (Beacon Company (b))

Description, properties, uses

White, waxy material. Melting point, capillary tube, 53-54° C. pH of 3% aqueous dispersion (25° C.), 6.5-6.8. Emulsifier. (1a)

Chemical composition

Diglycol stearate (1)

Surface properties (2)

S. T., 25.8      I. T., 18.0      S. C., -13.3

(Source of sample, (a))

DIPEX (Stance Incorporated)

Description, properties, uses

A dark-colored aqueous solution; tends to form two layers on long standing and should be agitated before use. Used for laying dusts of various types, for breaking emulsions in oil fields, and as a mold lubricant in the rubber industry. Useful as a cheap, low-grade wetting agent. (1)

Chemical composition

A water solution of the sodium sulfonates derived from the aromatic constituents of mineral oil. It is obtained from the sludge resulting from the treatment of mineral oil with fuming sulfuric acid in the manufacture of white oils. (1)

Surface properties (1)

Conc. (%)	4.0	2.0	1.0	0.5	0.25	0.125
S. T.	36.0	39.4	40.5	42.3	43.5	45.2



**DIPEX M (Stanco Incorporated)**

**Description, properties, uses**

A reddish brown, water dispersion of oil-soluble purified sodium sulfonates, having a gel-like structure. Disperses readily in water; dissolves completely in alcohol to a clear fluid product. Immiscible with oil, but becomes oil-soluble in removing the excess water by evaporation. Stable to heat up to 150°-160° C. if neutral or slightly alkaline, but unstable to heat in presence of mineral acid. Used as an emulsifier for oils, as a wetting agent, and as a mold lubricant in the rubber industry. (1)

**Chemical composition**

The soaps contained in this product are identical in composition to those in Stanco Soap Product No. 302; may contain small amounts of isopropyl alcohol used in the purification process. (1)

**DREFT (Procter and Gamble Co.)**

**Description, properties, uses**

White powder, soluble in water. No precipitation or separation in the hardest natural water at normal temperature. Unaffected by many of the common metals. Stable and effective in acid, alkaline or neutral solution. Does not hydrolyze in solution. Wetter, emulsifier, detergent. (1)

**Chemical composition**

Sodium lauryl sulfate (6)

**Surface properties (2)**

S. T., 28.8      I. T., 5.4      S. C., -3.7

**DRENE (Procter and Gamble Co.)**

**Description, properties, uses**

A liquid preparation for shampoo purposes. Does not precipitate or separate in the hardest natural water at normal temperature. Unaffected by many of the common metals. Neutral and does not hydrolyze in solution. (1)

**Chemical composition**

Triethanolamine lauryl sulfate (1)

**DRY-LET (Cowles Detergent Company)**

**Description, properties, uses**

An anhydrous, non-deliquescent powder. A 0.06% solution as pH of 11.5. Can be mixed with caustic soda to yield the equivalent of any desired higher ratio silicate. Effective as an adjuvant to soaps and other detergents and emulsifiers. A detergent for general use. (1)

**Chemical composition**

Commercial anhydrous sodium metasilicate (1)

**Surface properties (2)**

S. T., 65.1      I. T., 28.1      S. C., -62.7

**DUOSOLVE GRAINS (W. H. and F. Jordan, Jr., Mfg. Co.)**

**Description, properties, uses**

White, fine crystals. Scouring agent and adjuvant for detergents (1)

**Chemical composition**

Sodium hexametaphosphate (3)

**Surface properties (2)**

S. T., 59.1      I. T., 39.4      S. C., -68.0

DUPONOL 80 (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Yellow, transparent, mobile liquid (2).

Wetter, emulsifier, detergent (1).

Chemical composition

Long-chain alcohol sulfate (1)

DUPONOL L-144 (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Wetter, emulsifier, detergent (1)

Chemical composition

Long-chain alcohol sulfate (1)

DUPONOL LS (flakes and paste) (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

The paste is a free-flowing fluid; the powder is light tan in color.

Wetter, emulsifier, detergent. Same as Gardinol LS. (1)

Chemical composition

Sodium oleyl sulfate (1)

Surface properties (2)

Flakes: S. T., 29.4 I. T., 3.0 S. C., -1.9

Paste: S. T., 27.3 I. T., 3.9 S. C., -0.7

DUPONOL LE (Dry) (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

A white powder. Emulsifier. (1)

Chemical composition

Sodium lauryl sulfate (3). Contains lauryl alcohol (5).

Surface properties (2)

S. T., 30.2 I. T., 6.8 S. C., -6.5

DUPONOL OS (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Light-brown, mobile liquid (2).

Wetter, emulsifier, detergent (1).

Chemical composition

Long-chain alcohol sulfate (1)

DUPONOL WA (flakes and paste) (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

The flake form is a white powder; the paste is an almost white "silly" paste. Wetter, emulsifier, detergent. (1)

Chemical composition

Sodium sulfate of technical lauryl alcohol (3). Contains lauryl alcohol (5).

Surface properties (2)

Flakes: S. T., 26.4 I. T., 3.8 S. C., +0.3

Paste: S. T., 22.6 I. T., 6.7 S. C., +1.2

DUPONOL L-144-WD (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

A brownish-red, mobile liquid (2).

Wetter, emulsifier, detergent (4).

Chemical composition

Long-chain alcohol sulfate (4)

DUPONOL WS (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Light-colored paste (2).

Wetter, emulsifier, detergent (4).

Chemical composition

Long-chain alcohol sulfate (4)

ELEMITE (Jacques Wolf & Co.)

Description, properties, uses

Light-brown, transparent, mobile liquid (2).

Wetter, detergent, for cleaning purposes (1).

Chemical composition

Sulfonated oils and solvents (1)

EMULPHOR A (General Dyestuff Corporation)

Description, properties, uses

Brown, oily liquid. Oil-soluble. Emulsifier. (1)

Chemical composition

A condensation product of ethylene oxide and an organic acid (1)

Surface properties (2)

S. T., 29.8      I. T., 6.0      S. C., -5.3

EMULPHOR EL (General Dyestuff Corporation)

Description, properties, uses

Viscous, oily liquid; greenish-brown color. Wetter, emulsifier. (1)

Chemical composition

A condensation product of ethylene oxide and an organic acid (1)

Surface properties (2)

S. T., 38.5      I. T., 7.2      S. C., -15.2

EMULSIFIER W-763-A (Jacques Wolf & Co.)

Description, properties, uses

Dark-brown, slightly viscous liquid (2).

Emulsifier, for oils and solvents (1).

Chemical composition

Sodium naphthenic sulfonate (1)

EMULSONE B (Glyco Products Co., Inc.)

Description, properties, uses

White, vegetable gum; odorless, tasteless, edible.

Substitute for gum tragacanth. Emulsifier. (1)

Chemical composition

A vegetable gum (1)

Surface properties (2)

S. T., 45.7      I. T., 13.3      S. C., -28.5

EMULSTEROL (Beacon Company)

Description, properties, uses

Light-colored lustrous wax, dispersible in hot water with stirring.

Emulsifier and suspending agent. (1)

ESCOL 77 (Cowles Detergent Company)

Description, properties, uses

Detergent for the laundry industry (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

ESCOLITE (Cowles Detergent Company)

Description, properties, uses

Detergent for the textile and laundry industries (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

ESCO SAVON (Cowles Detergent Co.)

Description, properties, uses

Light-tan powder (2).

Detergent and emulsifier for the laundry industry (1).

Chemical composition

A blend of sodium silicoaluminate and soap (3)

Surface properties (2)

S. T., 31.3      I. T., 3.5      S. C., -4.3

EVERNER 1 (Hercules Powder Co.)

Description, properties, uses

Yellow, mobile liquid (2).

Wetter and defoamer for the textile and paper industries (1).

Chemical composition

A soluble mixture with a sulfated oil base, containing a mixture of alcohols and hydrocarbon solvents. (1)

EVERNER 25-2 (Hercules Powder Co.)

Description, properties, uses

Amber, mobile liquid (2).

Wetter and defoamer for the textile and paper industries (1).

Chemical composition

Soluble compound with sulfated oil base, containing a mixture of alcohols. (1)

FLOEX (Ross and Rowe, Inc.)

Description, properties, uses

Black, viscous fluid; odorless, tasteless and non-toxic. Soluble in vegetable and animal fats and oils; soluble in petroleum oils and solvents; insoluble in water, acetone and alcohol. Practically neutral. A wetting agent for paints, printing inks and lubricants. (1)

Chemical composition

Condensation product of higher fatty acids. (1)

GARDINOL LS (flakes and paste)((a) E. I. du Pont de Nemours & Co., Inc.)  
((b) Procter and Gamble Co.)

Description, properties, uses

Supplied in both powder and paste form. No precipitation or separation in the hardest natural water at normal temperature. Unaffected by many of the common metals. Stable and effective in acid, alkaline or neutral solutions. Does not hydrolyze in solution. Wetter, emulsifier and detergent; also used as a dyeing assistant. (1b)

Chemical composition

Sodium sulfate of technical oleyl alcohol. (1b)

GARDINOL WA (flakes and paste)((a) E. I. du Pont de Nemours & Co., Inc.)  
((b) Procter and Gamble Co.)

Description, properties, uses

Supplied in both white powder and paste form. No precipitation or separation in the hardest natural water at normal temperature. Unaffected by many of the common metals. Stable and effective in acid, alkaline or neutral solutions. Does not hydrolyze in solution. Wetter, emulsifier, detergent. Also used as a dyeing assistant and finishing agent. (1b)

GLYCERYL LAURATE S (Glyco Products Co., Inc.)

Description, properties, uses

A light-colored liquid with very faint odor. Sp. gr. (25°/25° C.), 0.979. An ester of C. P. glycerin and lauric acid obtained from edible coconut oil, and can therefore be considered non-toxic. Soluble in alcohol, hydrocarbons and oils. Self-emulsifying in water. pH (25°C.) of 5% aqueous dispersion, 8.2-9.0. Emulsifier. (1)

Chemical composition

Glycerol laurate (1)

GLYCERYL MONORICINOLEATE (Glyco Products Co., Inc.)

Description, properties, uses

Amber-colored oil; free ricinoleic acid, 0.51%, water soluble extract, 7.5%. Dispersible in water; pH of 1.5% dispersion in water, 7.1. Emulsifier. (1)

Chemical composition

Glyceryl monoricinoleate (1)

Surface properties (2)

S. T., 33.0 I. T., 3.8 S. C., -3.3

GLYCERYL MONOSTEARATE (Beacon Company (a))

GLYCERYL MONOSTEARATE S (Glyco Products Co., Inc. (b))

Description, properties, uses

A cream-colored wax. Melting point, capillary tube, 56-57° C. Dispersible in water. pH at 25° C. of a 1% aqueous dispersion, 9.6-9.8. Emulsifier. (1)

Chemical composition

Glyceryl monostearate (1)

Surface properties (2)

S. T., 31.7, I. T., 15.9 S. C., -17.1

Source of sample (b)

GLYCERYL OLEATE ((a) Beacon Company)

GLYCERYL OLEATE (technical) ((b) Glyco Products Co., Inc.)

Description, properties, uses

A brown liquid. Soluble in alcohol and hydrocarbons. Dispersible in water.

Emulsifier. (1b)

Chemical composition

Glycerol oleate, technical (1b)

GLYCOSTERIN (Glyco Products Co., Inc.)

Description, properties, uses

A highly refined grade of glycol stearate (diglycol stearate).

A white, waxy material. Emulsifier. (1)

Chemical composition

Diglycol stearate (1). Sep U. S. Patent 1,914,100.

Surface properties (2)

S. T., 25.8 I. T., 18.0 S. C., -13.3

GRASSELLI IN-161 (E. I. du Pont de Nemours & Co., Inc.)

GRASSELLI IN-161-P

GRASSELLI IN-438

Description, properties, uses

See IN-161, IN-161-P, IN-438

GRASSELLI SPREADER-STICKER (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Brown, transparent, slightly viscous liquid (2).

Wetter and sticker for insecticidal sprays (1).

Chemical composition

Sodium oleyl sulfate and a synthetic resinous sticker (1)

Surface properties (2)

S. T., 33.6 I. T., 1.7 S. C., -4.8

HARTEX OIL K-40 (Hart Products Corp.)

Description, properties, uses

A detergent for the textile industry (1)

Chemical composition

Sulfated oils and solvents (1)

HARTEX OIL K-101 (Hart Products Corp.)

Description, properties, uses

A detergent for the textile industry (1)

Chemical composition

Soluble chlorinated solvents (1)

HARTEX OIL L-85 (Hart Products Corp.)

Description, properties, uses

A detergent for the textile industry (1)

Chemical composition

Glycol soaps containing buffered alkalies (1)

HARTOLEIN K-122 (Hart Products Corp.)

Description, properties, uses

A detergent for the textile industry (1)

Chemical composition

Pine oil soap containing buffered alkalies (1)

HARTOPENE (Hart Products Corp.)

Description, properties, uses

A specialty for the textile industry (1)

Chemical composition

Pine oil gel (1)



HORNKEM 1 (A. C. Horn Co.)

Description, properties, uses

A 35% solution of a sulphonated natural compound. Not miscible with oil or organic solvents. Slightly acid reaction, but can be modified so as to be neutral or alkaline. Stable and heat resistant in acid and alkaline solutions. Produces only a slight lowering of the surface tension of water, and hence is not a wetting agent. Dispersing agent for hydrophobic particles, especially pigments in aqueous medium. (1)

Chemical composition

Aqueous solution of sulfonated natural materials (1)

HORNKEM 3 (A. C. Horn Co.)

Description, properties, uses

An aqueous solution of the dispersing agent present in Hornkem 1, plus a wetting agent which does not detrimentally affect the dispersion. Disperser and wetter for hydrophobic particles, as dry pigments and dry colors in aqueous medium. (1)

Chemical composition

Aqueous solution of a sulfonated natural material present in Hornkem 1, plus a wetting agent. (1)

HYDRENE (Beacon Company)

Description, properties, uses

Brown-colored paste, pleasant odor. Recommended by the manufacturer for water wax emulsions and fluid oil emulsions. Tends to reduce foaming. Emulsifier. (1)

HYDROLALIN (Glyco Products Co., Inc.)

Description, properties, uses

A light-brown paste, for production of rubless floor polishes. Emulsifier. (1)

Surface properties (2)

S. T., 27.3      I. T., 15.2      S. C., -12.0

HYTERGEN (Hart Products Corp.)

Description, properties, uses

A detergent for the textile industry (1)

Chemical composition

Sulfated condensation product (1)

IGEPON A. P. (Extra) (General Dyestuff Corp.)

Description, properties, uses

Light-tan powder (2).

Detergent, wetter, emulsifier. Also manufactured in the following grades:

Extra Conc.; Extra Flakes; Liquid. (1)

Chemical composition

$\text{CH}_3(\text{CH}_2)_7\text{CH}:\text{CH}(\text{CH}_2)_7\text{COO CH}_2\text{CH}_2\text{SO}_3\text{Na}$  (6). Oleic acid ester of an aliphatic compound (1).

Surface properties (2)

S. T., 28.4      I. T., 1.3      S. C., +0.8

IGEPON T (Gel) (General Dyestuff Corp.)

Description, properties, uses

An opalescent gel. Wetter, emulsifier, detergent and scouring agent. (1)

Chemical composition (1)

$\text{C}_{17}\text{H}_{33}\text{CO.NH.C}_2\text{H}_4.\text{SO}_3\text{Na}$

Surface properties (2)

S. T., 27.1      I. T., 6.0      S. C., -2.6

IGEPON T (powder) (General Dyestuff Corp.)

Description, properties, uses

Fine, white powder. Wetter, emulsifier, detergent and scouring agent. (1)

Chemical composition (6)

$C_{17}H_{33}CO.N(CH_3).C_2H_4.SO_3Na$

Surface properties (2)

S. T., 28.8      I. T., 3.2      S. C., -1.5

IMMERSOL T X (Powder) (Nyanza Color and Chemical Co.)

(Chemical Mfg. Co.)

Description, properties, uses

A stable, slightly hygroscopic powder; neutral; stable in moderate concentrations of alkali; has definite fungicidal properties. Also manufactured in the following grades: Pasto; Solutions. (1)

Chemical composition

A sulfonated ether (1)

Surface properties (2)

S. T., 32.1      I. T., 3.8      S. C., - 5.4

IN-181 (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

White powder. Wetter. (1)

Chemical composition

Sodium lauryl sulfate (1)

Surface properties (2)

S. T., 27.1      I. T., 4.8      S. C., -1.4

IN-181-P (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

White, fine powder. Wetter. (1)

Chemical composition

Sodium lauryl sulfate and inert powder (1)

Surface properties (2)

S. T., 25.4      I. T., 4.7      S. C., +0.4

IN-438 (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Dark-brown liquid, slightly viscous. Wetter. (1)

Chemical composition

Sodium oleyl sulfate (1)

Surface properties (2)

S. T., 25.6      I. T., 7.6      S. C., -2.7

INTRAMINE (Synthetic Chemicals, Inc.)

Description, properties, uses

Light-tan powder (2).

Wetter, emulsifier, detergent. Used in textile and cosmetic industries (4).

Chemical composition

Sodium salt of sulfonated lauryl and myristyl collamido (4)

INVADINE B (Ciba Co., Inc.)

Description, properties, uses

A white powder. Wetter for hypochlorite baths. (1)

Chemical composition

Alkyl-naphthalenesulfonate derivative (1)

Surface properties (2)

S. T., 31.5      I. T., 2.5      S. C., -3.5

INVADINE C (Ciba Co., Inc.)

Description, properties, uses

Light-tan powder. Wetter for acid baths. (1)

Chemical composition

Alkyl-naphthalenesulfonic acid (1)

Surface properties (2)

S. T., 29.2      I. T., 4.7      S. C., -3.4

INVADINE N (Ciba Co., Inc.)

Description, properties, uses

Light-tan powder. Wetter. (1)

Chemical composition

Sodium alkyl-naphthalenesulfonate (1)

Surface properties (2)

S. T., 33.6      I. T., 3.5      S. C., -6.6

KIERASOL J. C. (John Campbell & Co., Inc.)

(American Cyanamid & Chemical Corp., successors)

Description, properties, uses

Light-brown, translucent, viscous liquid.

Kier boiling assistant, detergent. (1)

Chemical composition

Mixture of sulfonated castor oil and pine oil (1)

Surface properties (2)

S. T., 31.4      I. T., 4.5      S. C., - 5.4

KLIERSOL (Hart Products Corp.)

Description, properties, uses

Used for regenerating lime soaps (1)

Chemical composition

A phosphate salt (1)

LANACLARIN LM (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Wetter, detergent, dyeing assistant. Used chiefly in textile industry. (4)

Chemical composition

Long-chain alcohol sulfate plus solvent (1)

LAUREL SUPERSULFATES F (powder) (Laurel Soap Mfg. Co.)

Description, properties, uses

Fine powder, almost white. Detergent. (1)

Surface properties (2)

S. T., 32.5      I. T., 4.2      S. C., - 6.1

LAUREL SUPERSULFATES N (powder) (Laurel Soap Mfg. Co.)

Description, properties, uses

Fine powder, almost white. Detergent. (1)

Surface properties (2)

S. T., 33.5      I. T., 5.3      S. C., -8.3

LAUREL SUPERSULFATES NT (paste) (Laurel Soap Mfg. Co.)

Description, properties, uses

Cream-colored suspension, slightly viscous. Detergent. (1)

Surface properties (2)

S. T., 29.4      I. T., 4.6      S. C., -3.5

LIGHTNING PENETRATOR X (Commonwealth Color & Chemical Co.)

Description, properties, uses

Straw-colored, mobile liquid. (2).

Wetter and penetrant for textile industry. (4)

Chemical composition

Sulfonated higher fatty alcohol (4)

LOERIMOL (Glyco Products Co., Inc.)

Description, properties, uses

Light-colored powder. As effective in acids, salts, hard water, and alkalis, as in neutral solution. (1)

Surface properties (2)

S. T., 24.9      I. T., 5.5      S. C., +0.1

LOROL (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

A mobile, colorless, transparent liquid. Emulsifier. (1)

Chemical composition

Technical lauryl alcohol (3)

LOUPENE (Jacques Wolf & Co.)

Description, properties, uses

Dark, mobile liquid (2).

A wetter and detergent for the textile industry (1).

Chemical composition

Sulfonated oils and solvents (1)

LOUPOLE W-950 (Jacques Wolf & Co.)

Description, properties, uses

Brown, transparent, mobile liquid (2).

A wetter and detergent for the textile industry (1).

Chemical composition

Sulfonated oils and solvents (1)

LUPOGUM (Jacques Wolf & Co.)

Description, properties, uses

Light-colored powder (2).

Emulsifier and thickener (1).

Chemical composition

Powdered locust bean gum (1)

LUPOMIN (Jacques Wolf & Co.)

Description, properties, uses

Light-colored powder (2).

Emulsifier for oils, fats, waxes (1).

Chemical composition

A fatty acid ester (1)

MAPRO DEGUM AND SCOURER (Onyx Oil & Chemical Co.)

Description, properties, uses

Yellow powder (2).

Detergent for the textile industry (4).

Chemical composition

Sulfated fatty alcohol and auxiliaries (4)

MAPROFIX (Onyx Oil & Chemical Co.)

Description, properties, uses

White powder (2).

Wetter and detergent for the textile industry (4).

Chemical composition

Sulfated fatty alcohol (4)

MAPROMIN (Onyx Oil and Chemical Co.)

Description, properties, uses

White powder (2).

Wetter for the textile industry (4).

Chemical composition

Sulfated fatty alcohol (4)

MAPROMOL (Onyx Oil & Chemical Co.)

Description, properties, uses

White powder (2).

Wetter for the textile industry (4).

Chemical composition

Sulfated fatty alcohol (4)

MERCEROL (Sandoz Chemical Works, Inc.)

Description, properties, uses

Dark brown, mobile liquid (2).

Wetter for the textile industry (4).

MERPENTINE (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Dark-brown, transparent, slightly viscous liquid (2).

Wetter and dyeing assistant for the textile industry (1).

Chemical composition

Sodium alkyl naphthalene sulfonate plus solvent (1)

MERPOL B ( E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Light-brown, mobile liquid (2).

Wetter, detergent, and dyeing assistant for the textile industry (1).

Chemical composition

Long-chain alcohol sulfate plus solvent (1)

MERPOL C ( E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Amber, mobile liquid (2).

Wetter, detergent, and dyeing assistant for the textile industry (1).

Chemical composition

Long-chain alcohol sulfate plus solvent (1)

METSO, granular (Philadelphia Quartz Co.)

Description, properties, uses

White, granular, free-flowing, quickly soluble. Detergent for general industrial cleaning such as metal, glass, laundry. Silica content serves to buffer alkali action. Maintains constant pH over wide range of concentration. (1)

Chemical composition

Sodium metasilicate pentahydrate,  $\text{Na}_2\text{O} \cdot \text{SiO}_2 \cdot 5\text{H}_2\text{O}$ . (1)

29.15%  $\text{Na}_2\text{O}$

28.20%  $\text{SiO}_2$

42.20%  $\text{H}_2\text{O}$

METSO 22 (Philadelphia Quartz Co.)

Description, properties, uses

A pale, greenish-yellow, dry, free-flowing powder. Quickly soluble in warm or cold water. Especially suited for uses where cleaning solution cannot be maintained at a high temperature. Recommended by the manufacturer for cleaning in dairies, food plants, service stations, hotels, hospitals, and for general cleaning purposes. (1)

Chemical composition

An integral (as distinguished from mechanical) mixture of sodium metasilicate 5-hydrate plus a suitable amount of wetting material effective at low temperatures. (1)

METSO 66 (Philadelphia Quartz Co.)

Description, properties, uses

A brownish-yellow, dry, free-flowing powder. Recommended by the manufacturer for heavy duty cleaning, particularly metals. (1)

Chemical composition

An integral mixture of metasilicate 5-hydrate plus a suitable amount of a wetting material adapted for work at higher temperatures than is Metso 22. (1)



METSO 99 (Philadelphia Quartz Co.)

Description, properties, uses

A granular, free-flowing, white, quickly soluble detergent. Recommended by the manufacturer for heavy duty cleaning of metals. Of all alkaline cleansers, gives pH next highest to caustic soda, but has buffering action due to its silica content. (1)

Chemical composition

Sodium sesquisilicate hydrate,  $3\text{Na}_2\text{O} \cdot 2\text{SiO}_2 \cdot 11\text{H}_2\text{O}$ .

36.5%  $\text{Na}_2\text{O}$

23.50%  $\text{SiO}_2$

39.00%  $\text{H}_2\text{O}$

MISCIBOL (Glyco Products Co., Inc.)

Description, properties, uses

Paste, dark brown; resinous odor; alkaline reaction. Used in place of sulfonated oils where an acid product is undesirable. Emulsifier. (1)

Chemical composition

Potassium oleo-abietate (1)

Surface properties (2)

S. T., 52.4

I. T., 5.1

S. C., -7.0

MODINAL ES (Paste) ((a) E. I. du Pont de Nemours & Co., Inc.)

((b) Procter & Gamble Co.)

Description, properties, uses

In paste form. No precipitation or separation in the hardest natural water at normal temperature. Unaffected by many of the common metals. Stable and effective in acid, alkaline or neutral solutions. Does not hydrolyze in solution. Wetter, emulsifier, detergent. Also used as a dyeing assistant and finishing agent. (1b)

Chemical composition

Sodium oleyl sulfate (1b)

MONOPOLE OIL (Jacques Wolf & Co.)

Description, properties, uses

Light-brown, transparent, viscous liquid (2)

Wetter, emulsifier (1).

Chemical composition

A double-sulfonated castor oil (1)

Surface properties (2)

S. T., 34.8

I. T., 6.4

S. C., -10.7

MONOSULPH (National Oil Products Co.)

Description, properties, uses

Yellow, viscous liquid (2).

Wetter, for the textile industry (4).

Chemical composition

Highly sulfonated castor oil (4)

MACCOLENE F (National Aniline & Chemical Co., Inc.)

Description, properties, uses

Brown, mobile liquid (2).

Completely soluble in petroleum or chlorinated solvents; useful in dry cleaning, petroleum solvent degreasing, etc. Detergent. (1)

Chemical composition

Alkyl aryl sulfonate (1)

NACCONOL E (National Aniline & Chemical Co., Inc.)

Description, properties, uses

Tan flakes (2).

Specially prepared for washing spray residues from fruit (1).

Chemical composition

Sodium alkyl aryl sulfonate (4)

NACCONOL EP (National Aniline & Chemical Co., Inc.)

Description, properties, uses

Tan flakes (2).

An antipitting agent in nickel plating, and a corrosion inhibitor for sulfuric and hydrochloric acid pickling (1).

Chemical composition

Sodium alkyl aryl sulfonate (4)

NACCONOL NR (National Aniline & Chemical Co., Inc.)

Description, properties, uses

White, flaky solid; readily and completely soluble in soft water, hard water, or solutions of acid or alkali. Solubility, 9.0 grams per 100 cc. at 25° C. in neutral soft water. pH at any concentration, 6.9 to 7.1. Practically unaffected in 24 hours by boiling 10% caustic soda or boiling 15% sulfuric acid. May be used in oxidizing solutions (hypochlorite or peroxide). Efficient in hard water. An all-purpose surface active agent and organic detergent. (1)

Chemical composition

Alkyl aryl sulfonate (not a sulfated fatty alcohol) (1)

NACCONOL NRL (National Aniline & Chemical Co., Inc.)

Description, properties, uses

Detergent; intended for use in power laundries (1)

Chemical composition

Sodium alkyl aryl sulfonate (4)

NACCONOL NRST (National Aniline & Chemical Co., Inc.)

Description, properties, uses

White flakes (2).

Has general properties of Nacconol NR, with greater solubility in water and greater foaming power. (1)

Chemical composition

Sodium alkyl aryl sulfonate (4)

NACCOSOL A (National Aniline & Chemical Co., Inc.)

Description, properties, uses

Light-colored powder (2).

Wetter, for textile industry (4).

Chemical composition

Sodium alkyl naphthalene sulfonate (4)

NEKAL A (General Dyestuff Corp.)

Description, properties, uses

Light-colored powder. Wetting and dispersing agent. (1)

Chemical composition

Sodium alkyl naphthalene sulfonate (1)

Surface properties

S. T., 33.2      I. T., 6.3      S. C., -9.0

NEKAL A.E.M. (General Dyestuff Corp.)

Description, properties, uses

Tan-colored powder. Wetting agent. (1)

Surface properties (2)

S. T., 33.6      I. T., 5.1      S. C., -8.2

NEKAL B (General Dyestuff Corp.)

Description, properties, uses

Light-brown powder. Wetting agent. (1)

Surface properties (2)

S. T., 30.0      I. T., 2.4      S. C., -1.9

NEKAL BX (General Dyestuff Corp.)

Description, properties, uses

Fine powder; light-tan color. Wetting agent and dyeing assistant. (1)

Chemical composition

Sodium alkyl naphthalene sulfonate (1)

Surface properties (2)

S. T., 30.7      I. T., 3.1      S. C., -3.3

NEKAL WF (General Dyestuff Corp.)

Description, properties, uses

A free-flowing, golden-brown liquid. Wetting agent. (1)

Surface properties (2)

S. T., 31.9      I. T., 4.3      S. C., -5.7

NELGIN (Glyco Products Co., Inc.)

Description, properties, uses

White, neutral powder; colloiddally dispersible in water.

Emulsifier. (1)

Surface properties (2)

S. T., 69.9      I. T., 41.3      S. C., -80.7

NEOMERPIN N (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Brown liquid with suspended solids. Wetter for electroplating. (4)

Chemical composition

Naphthalenesulfonic acid (1)

Surface properties (2)

S. T., 30.8      I. T., 3.1      S. C., -3.4

NEOMERPIN VD (E. I. du Pont de Nemours and Co. Inc.)

Description, properties, uses

Brownish-red, mobile liquid (2).

Wetter, especially textile and leather industries (4).

Chemical composition

Sodium alkyl naphthalene sulfonate and solvents (4)

NEOPEN SS (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Wetter and disperser (1)

Chemical composition

Sodium abietenesulfonate (3)

Surface properties (2)

S. T., 37.5      I. T., 6.4      S. C., -13.4

NEWPORT WHITE PINE OIL (General Naval Stores Division, Newport Industries, Inc.)

Description, properties, uses

Specific gravity at 15.5° C., 0.942-0.945. Refractive index at 20° C., 1.483. Boiling range, 210-225° C. A wetting agent and solvent recommended by the manufacturer for use as a blending agent in soap-solvent emulsions, as a constituent of disinfectants, and for froth control. (1)

Chemical composition

Mainly a terpineol, menthanols, fenchyl alcohol, borneol. (1)

NOPCO 1440 (National Oil Products Co.)

Description, properties, uses

Amber, mobile liquid (2).

Wetter for the textile industry (4).

Chemical composition

A soluble pine oil (4)

NOPCO 1935 (National Oil Products Co.)

Description, properties, uses

Brown, viscous liquid (2).

Used in Sanforizing process in textile industry (4).

Chemical composition

Sulfonated oil, vegetable type (4)

NOPCO 1967 (National Oil Products Co.)

Description, properties, uses

Reddish-brown, mobile liquid (2).

Wetter for textile industry (4).

Chemical composition

Sulfonated alkyl hydrocarbon (4)

NOVONACCO (National Aniline and Chemical Co.)

Description, properties, uses

Brown, coarse lumps (2).

Wetter for textile industry (4).

Chemical composition

Modified sodium alkyl naphthalene sulfonate (4)

NOVONACCO N.N (National Aniline & Chemical Co.)

Description, properties, uses

Dark-brown, opaque, mobile liquid (2).

Wetter for carbonizing agents for textile industry (4).

Chemical composition

Modified alkyl naphthalene sulfonic acid (4)

N.S.A.E. (Onyx Oil & Chemical Co.)

Description, properties, uses

Wetter, for textile industry (4)

Chemical composition

Alkyl naphthalene sulfonic acid ester (4)

OCENOL (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Liquid, amber color. Emulsifier. (1)

Chemical composition

Technical oleyl alcohol (3)

OLEO GLYCERYL SULFATE C (Onyx Oil & Chemical Co.)

Description, properties, uses

Brown, slightly viscous emulsion (2)

Wetter, for the textile industry (4).

Chemical composition

Oil ester sulfate (4)

OLEO GLYCERYL SULFATE O (Onyx Oil and Chemical Co.)

Description, properties, uses

Brown, cloudy, viscous liquid (2).

Wetter, for the textile industry (4).

Chemical composition

Oil ester sulfate (4)

OLIVESCO (Cowles Detergent Co.)

Description, properties, uses

A powder (2).

Detergent and emulsifier for the laundry industry

Chemical composition

Blend of sodium silicoaluminate (U. S. patent)  
and olive oil soap (3)

Surface properties (2)

S. T., 30.9      I. T., 2.7      S. C., -3.1

ONYXOL 66 (Onyx Oil & Chemical Co.)

Description, properties, uses

Brown, slightly cloudy, mobile liquid (2).

Wetter; for the textile industry (4).

Chemical composition

Oil ester sulfate (4)

ORANAP (Jacques Wolf & Co.)

Description, properties, uses

Brown paste (2).

Wetter and detergent (1).

Chemical composition

Sodium alkyl naphthalene sulfonate (1)

ORATOL (Jacques Wolf & Co.)

Description, properties, uses

Brown, viscous liquid (2).

Wetter and detergent (1).

Chemical composition

A sulfonated amide (1)

ORTHOSIL, regular (Pennsylvania Salt Mfg. Co.)

Description, properties, uses

Light-colored, granular solid (2).

Alkaline cleaning compound for metal cleaning (4).

Chemical composition

A concentrated alkaline compound (4)

ORTHOSIL, special (Pennsylvania Salt Mfg. Co.)

Description, properties, uses

Light-colored, granular solid (2).

Alkaline cleaning compound for metal cleaning (4)

Chemical composition

A concentrated alkaline compound (4)

ORVUS WA (paste and flakes) (Procter & Gamble Co.)

Description, properties, uses

White powder, or paste. No precipitation or separation in the hardest natural water at normal temperature. Unaffected by many of the common metals. Stable and effective in acid, alkaline, or neutral solutions. Does not hydrolyze in solution. A wetter, emulsifier and detergent. Recommended by the manufacturer as a dispersing agent and spreader for insecticides. (1)

Chemical composition

Sodium lauryl sulfate (1)

Surface properties (flakes) (2)

S. T., 25.8      I. T., 5.4      S. C., -0.7

PALMITO GLYCERYL SULPHATE CONC. (Onyx Oil & Chemical Co.)

Description, properties, uses

Paste; light-brown color. Detergent. (1)

Surface properties (2)

S. T., 30.1      I. T., 3.2      S. C., -2.8

PARA OIL (Jacques Wolf & Co.)

Description, properties, uses

Light-brown, viscous liquid (2).

Wetter and detergent for textile industry (1)

Chemical composition

Saponified oils (1)

PENATROL 60 (Beacon Co.)

Description, properties, uses

Straw-colored, free-flowing liquid (2).

Wetter and penetrant for paper, textiles, leather, metal cleaning, and agricultural sprays. Recommended by the manufacturer as a low-cost substitute for the sulfonated alcohols. (1)



PENATROL 65 (Beacon Co.)

Description, properties, uses

Light-yellow, free-flowing liquid (2).

Wetter and penetrant for paper, textiles, leather, metal cleaning, and agricultural sprays. Recommended by the manufacturer as a low-cost substitute for the sulfonated alcohols. Stated to be lower in cost, and somewhat less efficient, than Penatrol-60. (1)

PENETREX (Hercules Powder Co.)

Description, properties, uses

Brown, slightly viscous liquid (2).

Wetter and detergent for the textile industry (1).

Chemical composition

Soluble mixture containing cresol and tertiary alcohols. Is alkaline on pH scale. Contains about 35% water. (1)

PENETROL (Kay-Fries Chemicals, Inc.)

Description, properties, uses

Brown liquid, lactone-like odor. A spreader and sticker for such materials as nicotine sulfate, pyrethrum extract, derris extract, the arsenates, bordeaux mixture, the sulfurs, and ground derris root. (1)

Chemical composition

Oxidized petroleum hydrocarbons ( $32^{\circ}$ - $34^{\circ}$  Be), sulfonated, 90%; inert, 10% (1)

Surface properties (2)

S. T., 34.6      I. T., 4.2      S. G., -8.5

PENNSALT CLEANERS (Pennsylvania Salt Mfg. Co.)

Description, properties, uses

Detergents for metal cleaning (4)

Chemical composition

Concentrated alkaline cleaning compounds (4)

PENTASICON "T" (Merck & Co., Inc.)

Description, properties, uses

Brown, slightly viscous liquid (2).

Leveler and penetrant for textile industry (4).

Chemical composition

Sulfonated products of vegetable oils, fats, hydrocarbons (4)

PENTOGEN (Hart Products Corp.)

Description, properties, uses

Detergent for textile industry (1)

Chemical composition

Sulfated compound containing solvents (1)

**PHOSPHOTEX (Monsanto Chemical Company)**

Description, properties, uses

A white powder (2).

Detergent for kier boiling and silk degumming (3).

Chemical composition

Tetrasodium pyrophosphate (3)

**POTASSIUM PALMOLATE S. (Glyco Products Co., Inc.)**

Description, properties, uses

Cream-colored paste; fatty odor. Emulsifier. (1)

**POTASSIUM SULPHORICINOLEATE (Beacon Company)**

Description, properties, uses

A viscous liquid of brownish color. Emulsion stabilizer, particularly for cosmetics. (1)

Chemical composition

Potassium sulforicinoate (1)

**PROFLEX (Glyco Products Co., Inc.)**

Description, properties, uses

Light-colored, alkaline powder. Useful in preparation of water (emulsion) paints. Emulsifier. (1)

Surface properties (2)

S. T., 40.2 I. T., 8.8 S. C., -18.5

**PROLAURIN (Glyco Products Co., Inc.)**

Description, properties, uses

Light-colored liquid with faint odor. Miscible with alcohol, hydrocarbons and oils. Self-emulsifying in water. pH (25° C.) of 5% aqueous dispersion, 8.45. Sp. gr. (25°/25° C.), 0.940. Used similarly to Diglycol Laurate S. Emulsifier. (1)

Chemical composition

Propylene glycol laurate (1)

**PROLEIN (Glyco Products Co., Inc.)**

Description, properties, uses

Light-brown liquid with faint odor. Partially miscible with alcohol, completely miscible with hydrocarbons and oils. pH (25° C.) of 5% aqueous dispersion, 9.65. Sp. gr. (25°/25° C.), 0.948. Emulsifier. (1)

Chemical composition

Propylene glycol oleate (1)

**PROPYLENE LAURATE EDIBLE (Beacon Co.)**

Description, properties, uses

Amber-colored oil. Non-hygroscopic. High boiling. Miscible with alcohol, glycerine, glycol, hydrocarbons. Self-emulsifiable in water. pH of 5% aqueous dispersion, 8.0. Odorless, non-toxic and edible. Physiologically harmless. Low surface tension. Low viscosity. Recommended by the manufacturer as an emulsifying agent in cosmetics, pharmaceuticals and foodstuffs, as a replacement for diglycol laurate and propylene glycol laurate. (1)

PROPYLENE STEARATE (Beacon Co.)

Description, properties, uses

A white, wax-like solid. Melting point, 57° C. Nearly odorless. Soluble hot in alcohols, oils, organic solvents. Dispersible in hot water. Contains no free alkalis or amines. pH of 5% aqueous dispersion, less than 7.0. Recommended by the manufacturer as an emulsifying and thickening agent, of particular interest to the cosmetic and pharmaceutical industries because of its non-toxicity, purity, and freedom from alkalis. (1)

PROSTEARIN (Glyco Products Co., Inc.)

Description, properties, uses

Light-colored, wax-like solid, melting point 37.5° C. Practically odorless. Miscible with hot alcohol, hot hydrocarbons and hot oils. Disperses in hot water. pH of 5% aqueous dispersion, 7.2-7.3. Sp. gr., 0.912 at melting point. Used similarly to Diglycol Stearate S. Emulsifier. (1)

Chemical composition

Propylene glycol stearate (1)

PROTOL (Beacon Company)

Description, properties, uses

Brown-colored liquid, pleasing odor. Soluble in both water and oils. Emulsifier. (1)

RADIACINE (Sandoz Chemical Works, Inc.)

Description, properties, uses

Greenish-yellow, translucent paste (2).  
Leveling agent for textile industry (4).

Chemical composition

Algin soap compound (4)

RAYON SCOUR A (Sandoz Chemical Works, Inc.)

Description, properties, uses

Brown, transparent liquid (2).  
Detergent for textile industry (4).

Chemical composition

Algin soap compound (4)

RESOLIN NF (Sandoz Chemical Works, Inc.)

Description, properties, uses

Light-brown, turbid, mobile liquid (2).  
Wetter for textile industry (4).

Chemical composition.

Algin soap compound (4)

RINFORS L (Sandoz Chemical Works, Inc.)

Description, properties, uses

Dark-brown, soft paste (2).  
Detergent for textile industry (4).

ROSOAP A (Glyco Products Co., Inc.)

Description, properties, uses

Brown-colored paste. Recommended by the manufacturer for preparing soluble pine oil and soluble kerosene for detergent and special cleaning purposes. (1)

Chemical composition

Sodium oleo-abietate (1)

ROYOX (Royce Chemical Co.)

Description, properties, uses

Brown, translucent, viscous liquid (2).

Detergent for the laundry industry (4).

Chemical composition

Pine oil with soap (4)

SANDOCARNIT (Sandoz Chemical Works, Inc.)

Description, properties, uses

Brown, mobile liquid. Slightly turbid (2).

Wetter for the textile industry (4).

SANDOPAN A (Sandoz Chemical Works, Inc.)

Description, properties, uses

Light-brown paste (2).

Detergent for the textile industry (4).

SANDOZOL N (Sandoz Chemical Works, Inc.)

Description, properties, uses

Brown, transparent liquid (2).

Wetter for the textile industry (4).

SANTOMERSE NO. 1 (Monsanto Chemical Co.)

Description, properties, uses

White flakes with slightly aromatic odor. Wetting agent, emulsifying agent, detergent. Moisture content about 2%. Apparent sp. gr. 0.35-0.45. pH of 1 percent solution in distilled water at 30° C., 7.5-8.5. A cold stock solution may contain 20-30% of wetting agent; a paste may be made with greater than 35%. No turbidity in water up to 508 p.p.m. hardness. Aqueous solutions stable at boiling temperatures. Salted out by alkalis but otherwise chemically stable to them. Stable to 10% sulfuric acid. (1)

Chemical composition

Salt of a substituted aromatic sulfonic acid, plus an inorganic salt. (1)

Surface properties (1)

Conc. (%)	0.5	0.25	0.125	0.0625	0.03125
S. T. (25°C.)	32.4	32.6	32.5	31.8	34.4

# SANTOMERSE NO. 2 (Monsanto Chemical Co.)

## Description, properties, uses

White flakes with slightly aromatic odor. Wetting agent, amulsifying agent, detergent. Moisture content about 2%. Apparent sp. gr., 0.4-0.5 pH of 1 percent solution in distilled water at 30° C., 10.2-10.5. A cold stock solution may contain up to 10-20%; a paste may be made with greater than 30%. No turbidity in water up to 576 p.p.m. hardness. Aqueous solutions stable at boiling temperatures. Salted out by alkalis but otherwise chemically stable to them. (1)

## Chemical composition

Salt of a substituted aromatic sulfonic acid (1)

## Surface properties (1)

Conc. (%)	0.5	0.25	0.125	0.0625	0.03125
S.T. (25° C.)	33.1	33.5	34.2	34.3	35.7

# SANTOMERSE NO. 3 (Monsanto Chemical Co.)

## Description, properties, uses

A white, hygroscopic powder with slightly aromatic odor. Wetting agent, emulsifying agent, detergent. Moisture content about 1%. Apparent sp. gr. about 0.5-0.6. pH of 1% solution in distilled water at 30° C., 7.5-8.5. A cold stock solution may contain 20-30% of wetting agent; a paste may be made with greater than 45%. No turbidity in water up to 423 p.p.m. hardness. Aqueous solutions stable at boiling temperatures. Salted out by alkalis but otherwise chemically stable to them. Stable to 10% sulfuric acid. Solubility characteristics similar to Santomerse D. (1)

## Chemical composition

Salt of a substituted aromatic sulfonic acid (1)

## Surface properties (1)

Conc. (%)	0.5	0.25	0.125	0.0625	0.03125
S.T. (25° C.)	35.9	36.0	36.0	37.2	41.9

# SANTOMERSE NO. 3 PASTE (Monsanto Chemical Co.)

## Description, properties, uses

Consists of 75% Santomerse No. 3 plus 25% water. Otherwise, similar to Santomerse No. 3. (1)

## Chemical composition

Salt of a substituted aromatic sulfonic acid, plus water (1).

# SANTOMERSE D (Monsanto Chemical Co.)

## Description, properties, uses

A white, hygroscopic powder with slightly aromatic odor. Wetting agent, emulsifying agent, detergent. Moisture content about 1%. Apparent sp. gr. about 0.5. pH of 1% solution in distilled water, 7-8 at 30° C. A cold stock solution may contain 30-40% of wetting agent; a paste may be made with greater than 50%. No turbidity in water of 1,000 p.p.m. hardness. Aqueous solutions stable at boiling temperatures. Salted out by alkalis but otherwise chemically stable to them. Stable to 10% sulfuric acid. Readily soluble in ethyl alcohol, o-dichlorobenzene, toluene, benzene; moderately soluble in carbon tetrachloride, glycerine, kerosene, pine oil, naphtha, oleic acid, turpentine; insoluble in acetone, ethylene dichloride, linseed oil. (1)

## Chemical composition

Salt of a substituted aromatic sulfonic acid (1)

## Surface properties (1)

Conc. (%)	0.5	0.25	0.125	0.0625	0.03125
S.T. (25° C.)	37.4	37.7	38.5	43.8	47.9

# SANTOMERSE S (Monsanto Chemical Co.)

## Description, properties, uses

A 30% aqueous solution, sp. gr. 1.050-1.060 at 25° C. Otherwise, similar to Santomerse D. (1)

## Chemical composition

Salt of a substituted aromatic sulfonic acid, in aqueous solution (1).

# SAPAMINE A (Ciba Co., Inc.)

## Description, properties, uses

Leveling agent for the textile industry (4)

## Chemical composition

Diethyl aminooethyl oleyl amide acetate (4)

# SCOUROL W. P. Powder (E. F. Houghton & Co.)

## Description, properties, uses

Buff-colored granules. Wetter and detergent. (1)

## Chemical composition

Mixture of alkaline detergents and penetrants (1)

## Surface properties (2)

S. T., 26.9 I. T., 0.8 S. C., +2.8

# SCOURTEX H-73 (Hart Products Corp.)

## Description, properties, uses

Detergent for the textile industry (1)

## Chemical composition

Sulfated oils and solvents (1)

# SILVATOL I (Ciba Co., Inc.)

## Description, properties, uses

Dark brown, mobile liquid (2).

Detergent for dry cleaning industry (4).

## Chemical composition

Pine oil compound (4)



SILVATOL II (Ciba Co., Inc.)

Description, properties, uses

Detergent for the dry cleaning industry (4)

Chemical composition

Pine oil compound (4)

SOAPALITE (Cowles Detergent Company)

Description, properties, uses

Detergent and emulsifier for the laundry industry (1)

Chemical composition

Mixture of alkaline salt and wetting agent (1)

SOAPOTOL (Commonwealth Color & Chemical Co.)

Description, properties, uses

Light-colored, granular solid (2).

Wetter and detergent for textile industry (4).

Chemical composition

Derivative of higher sulfonated alcohol (4)

SODIUM SULPHORICINOLEATE (Beacon Company)

Description, properties, uses

A heavy liquid, light-brown color, neutral in reaction. Emulsifier and emulsion stabilizer. (1)

Chemical composition

Sodium sulforicinoleate (1)

SOLHEX (Hercules Powder Co.)

Description, properties, uses

Yellow, mobile liquid (2).

Wetter and spotter for the textile industry. Suitable for use in kiers and for other general detergent processes. (1)

Chemical composition

A soluble oil containing hydrocarbon and hydrogenated solvents, with a sulfated castor oil base. Is alkaline on pH scale. Contains about 35% water. (1)

SOLUBLE PINE OIL S-190 (Jacques Wolf & Co.)

Description, properties, uses

Light-brown, slightly viscous liquid (2).

Detergent and disinfectant (1)

Chemical composition

Pine oil in emulsion (1)

SOLVADINE NC (Ciba Co., Inc.)

Description, properties, uses

Amber, mobile liquid (2).

Wetter for textile industry (4).

Chemical composition

Alkylated aryl sulfonate (4)

SORBITOL LAURATE (Glyco Products Co., Inc.)

Description, properties, uses

Light-colored liquid, dispersible in water. pH of a 5% aqueous dispersion, 6.8. Soluble in alcohol, hydrocarbon solvents, mineral and vegetable oils. Emulsifying agent, with definite surface tension reducing properties. (1)

Chemical composition

Sorbitol laurate (1)

SORBITOL OLEATE (Glyco Products Co., Inc.)

Description, properties, uses

Light-brown liquid, odorless and practically tasteless. pH of 5% aqueous dispersion, 8.55. Soluble in alcohol, hydrocarbon solvents, mineral and vegetable oils. Emulsifying agent; surface tension depressant. (1)

Chemical composition

Sorbitol oleate (1)

SOY-O-EMULSION (Insect-O-Cide Laboratories)

Description, properties, uses

Amber-colored liquid, pour point below 40° F. Sp. Gr., 0.91. Miscible with petroleum fractions and many organic liquids. Soluble in acetone. Wetter and emulsifier. (1)

Chemical composition

A dry-processed soybean oil, containing a fixed percentage of primary alcohols (1)

SS-3 (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

Now marketed as Grasselli Spreader-Sticker (1)

STANCO SOAP PRODUCT NO. 302 (Stanco Incorporated)

Description, properties, uses

A concentrated solution in a paraffine oil of purified sodium sulfonates. Clear, reddish brown in color and very viscous at room temperature. Miscible in all proportions with oil. Insoluble in water but readily dispersed therein with agitation and heat. A 3% dispersion in water has pH of 8.8; the pH drops rapidly on dilution. Useful in compounding high grade cutting, textile, quenching and leather oils where high color, appearance, and good emulsibility are important. (1)

Chemical composition

A solution in paraffine oil of purified, oil-soluble, sodium sulfonates derived mainly from certain alkyl constituents of a mineral oil. Obtained by neutralization with sodium carbonate of the oil-soluble sulfonic acids resulting from the treatment of mineral oils with fuming sulfuric acid in the manufacture of white oils. (1)

Surface properties (1)

Conc. 3% (dispersion)

S. T. 34

STANCO SOAP PRODUCT NO. 312 (Stanco Incorporated)

Description, properties, uses

A solution in a paraffine oil of purified sodium sulfonates.

The soaps are the same as those in Soap Product No. 302, but the solution is less concentrated and consequently more fluid. The properties are essentially the same as for No. 302, but as it is more fluid it is easier to blend with oils and easier to disperse in water. (1)

Chemical composition

Same as Stanco Soap Product No. 302, but less concentrated. (1)

Surface properties (1)

Conc. 4% (dispersion)

S. T. 34

STEARO GLYCERYL SULFATE CONC. (Onyx Oil & Chemical Co.)

Description, properties, uses

Cream-colored paste. Detergent. (1)

Surface properties (2)

S. T., 31.3      I. T., 5.5      S. C., -6.3

STENOL (E. I. du Pont de Nemours & Co., Inc.)

Description, properties, uses

White, waxy flakes. Emulsifier. (1)

Chemical composition

Technical stearyl alcohol (3)

SULFATATE (Glyco Products Co., Inc.)

Description, properties, uses

Light-brown liquid. Completely miscible with water. Miscible with dilute alcohol. Insoluble in oils and hydrocarbons. Sp. gr. (22°/22° C.), 1.152. pH of 5% solution in water, 9.2-9.4. Effective in acids, salts, hard water and alkalis. Refluxing for several hours at pH of 2 to 11 shows no deterioration or breakdown. Recommended by the manufacturer for textile scouring, leather and paper impregnation, and as a constituent of cosmetics and polishes. Wetting agent, emulsifying agent. (1)

Chemical composition

A hydrocarbon sulfonate (not a sulfated fatty alcohol). (1)

SULFONATED CASTOR OIL (L. Sonneborn Sons)

Description, properties, uses

Viscous, transparent liquid; light yellow color. Wetter, emulsifier. (1)

Chemical composition

Castor oil, sulfonated (1)

Surface properties (2)

S. T., 34.3      I. T., 3.9      S. C., -7.7

SULFO TURK S. (Glyco Products Co., Inc.)

Description, properties, uses

Orange-brown, viscous oil with pleasant, spicy odor. Non-hygroscopic, non-drying, non-volatile, anhydrous. Soluble in hydrocarbons; emulsifies in water. Will not turn rancid; will not crystallize or precipitate on freezing. pH of 5% dispersion, 9.6. (1)

Chemical composition

Modified sulfonated hydrocarbon, sodium salt (1)

**SULPHOSOL (Beacon Company)**

Description, properties, uses

A naphthenic soap recommended by the manufacturer as a general low-cost emulsifying agent. A semi-viscous fluid, cherry color, with slight odor. Sp. gr. (20° C.), 1.01. Neutral. Effective in the cold, yielding oil-in-water emulsions. Recommended by the manufacturer as a base for soluble oils. (1)

Chemical composition

Naphthenic soap (1)

**SULPHOSOPE-E (Beacon Company)**

Description, properties, uses

A naphthenic soap recommended by the manufacturer as a general low-cost emulsifying agent. A viscous fluid, reddish-brown color, with slight odor. Sp. gr. (20° C.) 1.03. Neutral. Effective in the cold, yielding oil-in-water emulsions. (1)

Chemical composition

Naphthenic soap (1)

**SULPHOSOPE-F (Beacon Company)**

Description, properties, uses

A naphthenic soap recommended by the manufacturer as a general low-cost emulsifying agent. A viscous fluid, brown color, with slight odor. Sp. gr. (20° C.), 1.03. Alkaline reaction. Effective in the cold, yielding water-in-oil emulsions. (1)

Chemical composition

Naphthenic soap (1)

**SURFAX "G" (E. F. Houghton & Co.)**

Description, properties, uses

A chemically neutral wetter and detergent, resistant to acids, alkalis and hard water. A light-colored granular powder. Recommended by the manufacturer for processing of textiles, leather, paper; also for fruit washing and general detergent uses. (1)

Chemical composition

Alkylated aromatic sulfonate (1)

**SURFAX W. O. (E. F. Houghton & Co.)**

Description, properties, uses

Light-brown, slightly viscous liquid (2).  
Wetting and finishing liquid for the textile industry. A penetrant and softener. (1)

Chemical composition

Fatty oil sulfate (1)

**SUSPENDITE (Glyco Products Co., Inc.)**

Description, properties, uses

A modified colloidal clay having good emulsifying powers. 4% in water, made slightly alkaline, gives a gel. Stable in acid solutions. (1)

Chemical composition

A colloidal clay (1)

TAR REMOVER "F" (Hercules Powder Co.)

Description, properties, uses

Amber, mobile liquid (?).

A detergent designed particularly for the removal of tar spots from wool in process. Generally applicable as a detergent in the textile industry. (1)

Chemical composition

A soluble oil containing aromatic hydrocarbon solvents and pine oil, with a base of sulfated castor oil. Is alkaline on pH scale. Contains about 25% water. (1)

TENSOL (Synthetic Chemicals, Inc.)

Description, properties, uses

Brown paste (?).

Disperser and emulsifier for the textile and cosmetic industries (4)

Chemical composition

A sulfonated ether (4)

TERGITOL 4 (Carbide and Carbon Chemicals Corp.)

Description, properties, uses

Light-yellow color, transparent (2).

A liquid dispersion of a sodium sulfate of a higher synthetic alcohol. Density, 8.83 lb. per gal. at 20° C.; alkalinity, less than 2.0% calculated as  $\text{Na}_2\text{CO}_3$ ; contains no iron; color is not darker than a 0.0007 N iodine solution. Due to its solubility properties, Tergitol 4 is more effective than other Tergitols for solutions containing intermediate concentrations (0.5 to 5.0%) of dissolved materials (acids, bases, salts, organic compounds, etc.). Useful in 5% mineral acid solutions; stable in hypochlorite and acid peroxide bleach liquors. Effective in kier-boiling, mercerizing, carbonizing, felting, and scouring operations. A wetter, dispersant, penetrant and detergent. (1)

Chemical composition

Sodium sulfate of a higher synthetic secondary alcohol. See U. S. patent 2,088,014. (1)

TERGITOL 7 (Carbide and Carbon Chemicals Corp.)

Description, properties, uses

Light-yellow color, transparent (2).

A liquid dispersion (25%) of a sodium sulfate of a higher synthetic alcohol. Density, 8.64 lb. per gal. at 20° C.; alkalinity, less than 2.0% calculated as  $\text{Na}_2\text{CO}_3$ ; contains no iron; color is not darker than a 0.0007 N iodine solution. Due to its solubility properties, Tergitol 7 is more effective than other Tergitols for solutions containing relatively small concentrations (up to 0.5%) of dissolved materials (acids, bases, salts, organic compounds, etc.). Applicable in wool, cotton, silk, rayon, leather and paper processing; good emulsifier for low viscosity hydrocarbons and chlorinated hydrocarbons. A wetter, dispersant, penetrant and detergent. (1)

Chemical composition

Sodium sulfate of a higher synthetic secondary alcohol. See U. S. patent 2,088,019. (1)

Surface properties (2)

S. T., 25.9      I. T., 2.6      S. C., +2.0



**TERGITOL 8 (Carbide and Carbon Chemicals Corp.\***

**Description, properties, uses**

Light-yellow color, transparent (2).

A liquid dispersion of a sodium sulfate of a higher synthetic alcohol. Density, 9.44 lb. per gal. at 20° C.; alkalinity, less than 2.0% calculated as  $\text{Na}_2\text{CO}_3$ ; contains no iron; color is not darker than a 0.0007 N iodine solution. Due to its solubility properties, Tergitol 8 is more effective than other Tergitols for solutions containing high concentrations (greater than 5.0%) of dissolved materials (acids, bases, salts, arganic compounds, etc.). Stable in concentrated acids; stable in 25-percent caustic soda at its boiling point. Valuable in mercerizing processes. A wetter, dispersant, penetrant and detergent. (1)

**Chemical composition**

40% solution of sodium 2-ethyl hexyl sulfate in water (1)

**TETRAPOTASSIUM PYROPHOSPHATE (Monsanto Chemical Co.)**

**Description, properties, uses**

White, anhydrous, powder. Solubility at 25° C., 190 grams in 100 grams of water. Slightly more hygroscopic than glycerine. Suggested for use in shampoos and liquid soaps, in textile oils and soaps, and in wool scouring. A soap builder with high solubility, emulsifying ability and power to suppress formation of insoluble soaps. (1)

**Chemical composition**

Tetra potassium pyrophosphate,  $\text{K}_4\text{P}_2\text{O}_7$ . (1)

**TETRASODIUM PYROPHOSPHATE (American Cyanamid & Chemical Corp.)**

(E. I. du Pont de Nemours & Co., Inc.)

(Victor Chemical Works)

**Description, properties, uses**

Emulsifier and soap builder (1)

**Chemical composition**

Tetrasodium pyrophosphate,  $\text{Na}_4\text{P}_2\text{O}_7$ . (1)

**TETRE AMINE LIOLEATE (Beacon Company)**

**Description, properties, uses**

A tan-colored paste emulsifier for emulsifying oils and waxes. (1)

**TETRE AMINE OLEATE (Beacon Company)**

**Description, properties, uses**

A brown paste emulsifier. Recommended by the manufacturer for fluid emulsions. (1)

**TETRE AMINE STEARATE (Beacon Company)**

**Description, properties, uses**

A light-colored wax. Recommended by the manufacturer for use in cosmetics and other bodied emulsions. (1)

**TEXTILE ESCOLITE (Cowles Detergent Co.)**

**Description, properties, uses**

Scouring agent for the textile industry (1)

**Chemical composition**

Sodium silico aluminate, U. S. patent 1,419,625 (3)



TRAMOLIN (Hercules Powder Co.)

Description, properties, uses

Light-brown, viscous, liquid emulsion (2).

Wetter, dye-leveller and finishing agent for the textile industry.

Emulsifier for pine oil, mineral oils and some vegetable oils. (1)

Chemical composition

A well-sulfated olive oil. Is acid on pH scale. Total fats by other extraction, 68%. Contains no free mineral acid. (1)

TRIETHANOLAMINE STEARATE (Beacon Company)

Description, properties, uses

Amber-colored paste, faint ammoniacal odor. Sp. gr., slightly less than water. Soluble in alcohol; very soluble in hydrocarbons; dispersible in hot water. Recommended by the manufacturer for preparation of leather dressings, polishes, cosmetics, sizing and waterproofing emulsions. Emulsifier. (1)

Chemical composition

Triethanolamine stearate (1)

TRIGAMINE (Glyco Products Co., Inc.)

Description, properties, uses

A fairly viscous, light-colored liquid with a pleasant odor. Completely soluble in water, glycerin, the glycols, and 50% alcohol. Immiscible with oils and hydrocarbon solvents. Specific gravity, 1.17 at 25°/25° C. A 10% solution has pH of 9.7. Practically non-hygroscopic at ordinary humidities. On heating, loses a small amount of molecularly combined water and its neutralization equivalent rises. May be substituted for triethanolamine in most cases of saponification and emulsification. (1)

TRIGAMINE STEARATE (Glyco Products Co., Inc.)

Description, properties, uses

Light-colored, odorless, wax-like solid. Melting point, 49° C.

Does not oxidize or discolor with age. Emulsions made with it are stable and remain white indefinitely. Melts to a thin liquid which is easy to mix. Emulsifier. (1)

TRIHYDROXYETHYLAMINE STEARATE (T.S.S.) (Glyco Products Co., Inc.)

Description, properties, uses

A light-brown, wax-like material; faint fatty odor. Emulsifier. (1)

Chemical composition

Trihydroxyethylamine stearate (1)

Surface properties (2)

S. T., 25.6      I. T., 14.2      S. C., -9.3

TRIMETHYLOLAMINOMETHANE (Commercial Solvents Corp.)

Description, properties, uses

Light-colored, crystalline solid (2).

Fatty acid salts of this compound used as wetters, emulsifiers, detergents. (1)

Chemical composition

Fatty acid salts of named compound (1)

TRITON 720 (Röhm & Haas Co., Inc.)

Description, properties, uses

White, slightly viscous emulsion (2).

A commercial detergent recommended by the manufacturer for the removal of lead and arsenic residue from sprayed fruits, the degreasing of hides in the leather industry, for soaping and scouring operations in the textile industry, and for general cleaning and washing purposes. (1)

Chemical composition

Sulfonated ether (1)

TRITON 812 (Röhm & Haas Co., Inc.)

Description, properties, uses

A powdered wetting and penetrating agent, highly effective in alkaline solutions. Recommended by the manufacturer as a metal cleaner, and for use in cleaners containing large quantities of soda ash or sodium metasilicate. (1)

Chemical composition

Sulfonated ether (1)

TRITON M-25 (Röhm & Haas Co., Inc.)

Description, properties, uses

Brown-colored, mobile liquid. Wetter, particularly for solutions containing 20% or more of caustic alkali. (1)

Chemical composition

Sodium salt of an organic ether acid (1)

Surface properties (2)

S. T., 29.8      I. T., 9.5      S. C., -8.8.

TRITON S-18 (Röhm & Haas Co., Inc.)

Description, properties, uses

Red-brown, transparent, slightly viscous liquid (2).

Wetter and emulsifier in lubricants (4).

Chemical composition

Quaternary ammonium salt (4)

TRITON S-51 (Röhm & Haas Company, Inc.)

No longer manufactured. Replaced by Triton 720.

TRITON W-30 (Röhm & Haas Co., Inc.)

Description, properties, uses

Amber-colored, mobile liquid. Wetter and disperser. May be used in alkaline, neutral, or acid media. Resists formation of calcium and magnesium soaps. Recommended by the manufacturer as a general wetting and penetrating agent in textile processing. (1)

Chemical composition

Sulfonated aromatic ether alcohol (1)

Surface properties (2)

S. T., 29.0      I. T., 9.2      S. C., -7.7

**TURKELENE (Glyco Products Co., Inc.)**

Description, properties, uses

Non-viscous, amber-colored oil, neutral to phenolphthalein. Forms a milky dispersion in water; mixes clear with one to three parts mineral oil. Replaces sulfonated oils in many cases. Emulsifier. (1)

Surface properties (2)

S. T., 28.1      I. T., 5.9      S. C., -3.5

**TURKEY RED OIL (Hercules Powder Co.)**

Description, properties, uses

Amber, viscous liquid (2).

A wetter, dye-leveller and finishing agent for the textile industry.

Emulsifier for pine oil. (1)

Chemical composition

A sulfated castor oil containing an average amount of combined  $\text{SO}_3$ , and fairly high content of combined alkali. Alkaline on pH scale

Total fats by other extraction, 42%. (1)

**TYLOSE SL 100 (General Dyestuff Corp.)**

Description, properties, uses

Dry product resembling paper pulp. (2).

A colloid with swelling properties, solutions of which have marked lathering, emulsifying and detergent properties. Especially suited for admixture to soaps. (1)

**ULTRAVON K (Ciba Co., Inc.)**

Description, properties, uses

Light-tan, fine powder (2).

Detergent for the textile industry (4)

Chemical composition

Sulfonate of complex stearyl alkyl compound (4)

**ULTRAVON W (Ciba Co., Inc.)**

Description, properties, uses

Light-tan, fine powder (2).

Detergent for the textile industry (4)

Chemical composition

Sulfonate of complex stearyl alkyl compound (4)

**ULTRAWET (Atlantic Refining Co.)**

Description, properties, uses

Pale-yellow flakes. Solubility in distilled water, 100 g. per 100 cc. at 77° F.; pH of 6 g. per liter solution, 7.2. Not precipitated by 300 p.p.m. of calcium, magnesium or iron. Wetter, for all uses. (1)

Chemical composition

Water-soluble sodium sulfonate of petroleum hydrocarbons (average of 16 carbon atoms in hydrocarbon molecule) (1). Aromatic monosodium sulfonate (4).

Surface properties (2)

S. T., 33.8      I. T., 1.8      S. C., -5.1

ULTROIL (Hercules Powder Co.)

Description, properties, uses

Amber, viscous liquid (2).

A wetter, dye leveller and finishing agent for the textile industry.

Can be used very satisfactorily as an emulsifier for pine oil. (1)

Chemical composition

A sulfated castor oil containing a comparatively high percentage of combined  $\text{SO}_3$ . Is acid on pH scale but contains no free mineral acid.

Total fats by ether extraction, 65%. (1)

UNITEX (Commonwealth Color & Chemical Co.)

Description, properties, uses

A coarse, practically white powder. Readily soluble in hot water up to about 10%. Not affected by hard water, calcium salts and magnesium salts. Resistant to boiling 10% caustic soda and 15% sulphuric acid; also resistant to oxidation by hypochlorite or peroxide bleaching liquors. Rinses easily and improves the rinsibility of soap. Does not hydrolyze in solution; solutions are neutral in reaction; useful as a textile auxiliary. A wetter, penetrant, detergent and adjuvant to soaps. (1)

VATSOL OS (American Cyanamid & Chemical Corp.)

Description, properties, uses

Yellow-brown powder, somewhat hygroscopic (2).

Neutral; stable in acid and alkaline solutions; compatible with all spray materials; not suitable with arsenate of lead as it does not build up a deposit and the residue readily washes off with rain.

Strengths of 1/4 to 1/2 lb. per 100 gal. of water do not injure apple foliage. Same as Aerosol OS. (1)

Chemical composition

Sodium salt of an alkyl naphthalene sulfonic acid, practically 100% pure. (1)

Surface properties (2)

S. T., 35.9      I. T., 7.4      S. C., -12.8

VATSOL OT (American Cyanamid & Chemical Corp.)

Description, properties, uses

Resembles paraffin in appearance. Practically non-hygroscopic pellets (2).

Same as Aerosol OT. Wetter and scouring agent. (1)

Chemical composition

A dioctyl ester of sodium sulfo succinate (1)

Surface properties (2)

S. T., 25.9      I. T., 2.0      S. C., +2.6

VATSOL OEC (American Cyanamid & Chemical Corp.)

Description, properties, uses

This is Vatsol OT ground with a dry diluent (sodium sulfate). Stable for a few hours in dilute alkaline and acid solutions. Neutral in reaction and compatible with the common spray materials. Wetter and scouring agent. (1)

Chemical composition

A dioctyl ester of sodium sulfo succinate, plus sodium sulfate (1)

Surface properties (2)

S. T., 28.2      I. T., 3.7      S. C., -1.4

VIRIFOAM A (Glyco Products Co., Inc.)

Description, properties, uses

A light-colored powder, completely soluble in water. Suggested for the manufacture of stable foam and lather in aqueous solutions, as in soapless shampoos, tooth pastes, shaving creams. Penetrant and wetting agent. (1)

VOLCLAY KWK (American Colloid Company)

Description, properties, uses

A specially prepared pure bentonite (United States Patent No. 2,036,617) which has suspending, spreading, adhesive and emulsifying properties. Recommended by the manufacturer as a dispersing agent for solids in aqueous media, as an adjuvant to soaps and other detergents, for preparing insecticidal dusts and oil emulsions, and as a constituent of medicinal and cosmetic preparations. pH of aqueous suspension, about 9.2. Prepared in two grades which differ only in dry grain size, and which give the same results when in suspension. (1)

Chemical composition

About 90% montmorillonite, which has the approximate chemical formula:  $H_2O.(Al_2O_3, Fe_2O_3, 3MgO).4SiO_2 + n H_2O$

The remaining ten percent consists of small fractions of various clay minerals such as feldspar, gypsum, beidellite, calcium carbonate. (1)

WETANOL (Glyco Products Co., Inc.)

Description, properties, uses

A light-colored, practically odorless powder. Effective in acids, salts, hard water, and alkalis. Recommended by the manufacturer for textile scouring, leather and paper impregnation, and as a constituent of cosmetics and polishes. Wetting and emulsifying agent. (1)

Chemical composition

Modified sulfated fatty acid ester (4)

WETSIT (Jacques Wolf & Co.)

Description, properties, uses

Brown, mobile liquid (2).

Wetter for the textile and paper industries (1).

Chemical composition

Alkylated aromatic sulfonate (1)

WOLFCO SCOUR W-952-B (Jacques Wolf & Co.)

Description, properties, uses

Brown, transparent, mobile liquid (2).

Detergent for the textile industry (1).

Chemical composition

Emulsion of chlorinated solvents (1)

WOLFCO SOLVENT (Jacques Wolf & Co.)

Description, properties, uses

Light-brown, viscous liquid (2).

Detergent for the textile and laundry industries (1).

Chemical composition

Saponified animal fats with solvents (1)



XYNOMINES (Onyx Oil and Chemical Co.)

Description, properties, uses

Light-tan paste (2).

Wetter and detergent for the textile industry (4).

Chemical composition

Sulfonated fatty acid condensates (4)

YARMOR 302 (Hercules Powder Co.)

Description, properties, uses

A water-white liquid; mild pine odor. Typical analysis: Sp. Gr. at 15.5° C., 0.947. Refractive index at 20° C., 1.4633. Unpolymerized residue, 0.4%. Moisture, 0.2%. Flash point (Cleveland open cup), 79° C. Viscosity, Saybolt, at 100° F., 69 Sec. Color (Lovibond 500 Amber), 3. A.S.T.M. distillation; 5% at 216.2° C., 95% at 225.0° C. A wetting and penetrating agent used in the textile, insecticide, disinfectant, paint and varnish fields. (1)

Chemical composition

A pine oil fraction; contains terpene alcohols and terpene hydrocarbons (4)

YELKIN "S" (Ross and Rowe, Inc.)

Description, properties, uses

Yellow to brown syrupy liquid. Soluble in most organic solvents, in vegetable and animal fats and oils, and in petroleum oils and solvents. Partly soluble in alcohol and acetone. Readily dispersible in water. Used as a wetting and dispersing agent for finely divided solids in aqueous solutions, as a wetting and leveling agent in the dyeing of textiles, and as emulsifying agent for oil in water emulsions. (1)

Chemical composition

Soybean lecithin, specially treated to render it water dispersible. (1)

YELKIN "T" (Ross and Rowe, Inc.)

Description, properties, uses

Yellow to brown waxy substance (available in three grades); practically no odor; non-toxic. Soluble in most organic solvents; partly soluble in acetone and alcohol; soluble in vegetable and animal fats and oils and in petroleum oils and solvents; swells in water and forms a colloidal solution; lowers surface tension of oils and lowers interfacial tension in oil-water and oil-solid systems. Wetting agent and dispersing agent in paints and rubber; lubricating and softening agent in textile and finishing oils; wetting agent in insecticides. (1)

Chemical composition

Organic phosphatide, chiefly soybean lecithin (1)